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AMERICAN HOMES AND GARDENS

Vol. I
No. 1

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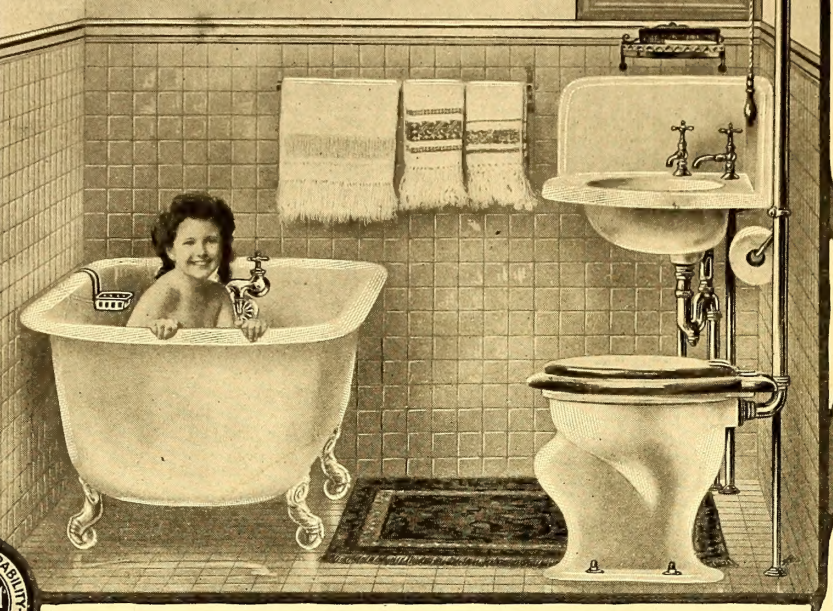

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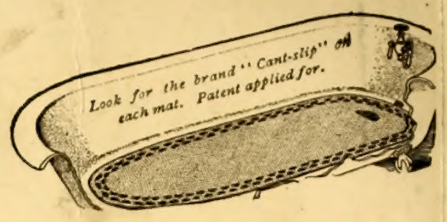

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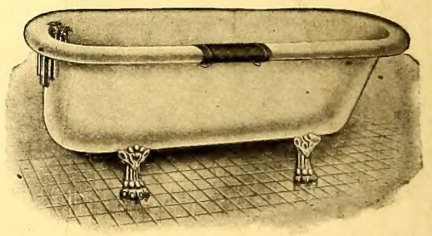

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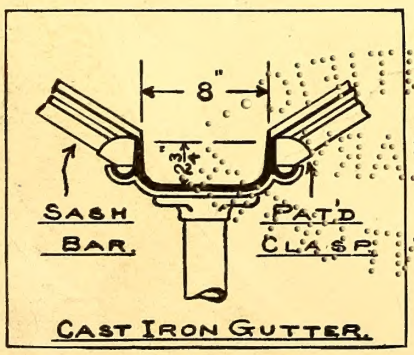

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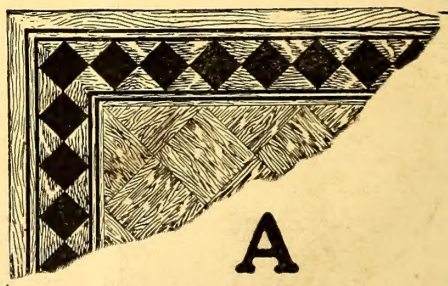

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AMERICAN HOMES AND GARDENS

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Flower-Lovers Lunching Under Beautiful Wistaria Arbors, Tokyo, Japan

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AMERICAN HOMES AND GARDENS

Volume I July, 1905 Number 1

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Rear Porch

"The Rocks," Country Seat of Eben D. Jordan, Esq., at West Manchester, Mass.

Monthly Comment

AMERICAN HOMES AND GARDENS comes to its readers in this number as a magazine that is at once old and new. It is old in so far as it is the first issue of a new series of the SCIENTIFIC AMERICAN BUILDING MONTHLY. Unlike other magazines, therefore, it has, from its first present issue, an assured and wide support, the support of an established clientele and the prestige of many years of successful publication in another form. But, save for this relation to its predecessor, the magazine is wholly and completely new.

THE Home is the watchword of AMERICAN HOMES AND GARDENS—the home as a place to be located and built, to be designed and constructed, to be furnished and arranged, to be adjusted to its environment, to be adapted to individual and personal needs; a place to be lived in, a place in which the manifold duties and activities of the country life are centered and originated. This programme is a broad one, for it leaves nothing untouched that relates to the physical aspect of the home, and is directly concerned with the influences these conditions have upon the home life itself. And the outdoor environment of the house will have equal attention in these pages, the gardens and fields, the streets and roads, the villages and towns. For the modern house is not a structure standing apart by itself, an object apart from every other object; but it is distinctly related to everything adjacent to it. All these matters come well within the scope of this magazine, and all will be adequately treated in it. Our programme will, therefore, be developed in the broadest way.

THE American home—the house, its furnishings, and its garden surroundings—has a strongly marked individuality, whose charm has won for it a well-earned and widely acknowledged reputation. The free use of the connecting arch and the portière within the house, and the wide-spreading porch without; the broad sweep of lawn or garden, unwalled and bordered by the public way—these are distinctive characteristics which will be richly illustrated and described in AMERICAN HOMES AND GARDENS, by photographs of the best work of the architect, art dealer, decorator and landscape artist, as combined in typical examples. Fortunately the growth of the American people in artistic appreciation has kept pace with their growth in wealth; they have made free use of their broader opportunities for travel; and their houses are being steadily enriched with intelligently selected art treasures, and decorated in those styles which have gained a wide acceptance as being true and enduring. This has been done without any sacrifice of the distinctly American features of our domestic architecture. These facts will be abundantly demonstrated in the pages of the new magazine.

THE best domestic work of our leading architects will be illustrated with a wealth of illustration and a completeness of detail attained by no other publication. So, too, the most interesting gardens of America will be presented with the same care, and numerous special articles on matters relating to the home and garden will add to the magazine's value.

AMERICAN HOMES AND GARDENS looks back upon a successful career of twenty years. The first issue was dated November, 1885, and the magazine was then known as the SCIENTIFIC AMERICAN, ARCHITECTS' AND BUILDERS' EDITION. This was in the early days of architectural periodical publication, and neither the material nor the mechanical means was at hand for adequate presentation of architectural themes. Twenty years ago is by no means a remote epoch, yet the domestic country work, which is now so representative of the best thought of our architects, was then quite undeveloped. There were no photographic reproductions in this first issue, but it contained two colored plates and a " detail " sheet. The new magazine evidently filled a place and met a want, for in less than a year a small country house —published in the number for October, 1886—attracted so much attention that the entire edition was quickly exhausted, necessitating a republication of this design in the issue for December following. The incident is of value as demonstrating, at a very early day, the public appreciation of the new publication.

ONCE begun, the Architects' and Builders' Edition of the SCIENTIFIC AMERICAN embarked upon a prosperous and busy career. The first photograph was printed in the number for July, 1888, and from that time onward every advantage was taken of the rapidly perfecting art of reproducing photographs, until the magazine became universally recognized and appreciated for the beauty of its illustrations, a feature that has always had the most careful attention and to which the success of the publication has been largely due. The next most significant event in the history of the magazine occurred with the issue for January, 1902, when the name was changed to the more harmonious form of the SCIENTIFIC AMERICAN BUILDING MONTHLY. The history of the magazine from that date to the present is too freshly in the minds of our readers to need further comment. Each issue in the past has been marked by an improvement over the preceding issue, and this record, continued for so long a time, is sufficient warranty for the future which AMERICAN HOMES AND GARDENS has for its readers.

A GROUP of illustrations in the first issue of the SCIENTIFIC AMERICAN, ARCHITECTS' AND BUILDERS' EDITION, reproduces several new buildings then ranked as among the most prominent in New York. It is a highly significant fact, and most flattering to their architects, that each of these can be so ranked to-day. They included the Produce Exchange, the house of Mr. W. K. Vanderbilt, the Dakota Apartment House, the Eden Musée, and the Central Park Apartments, now known as the Navarro Flats. These constitute a notable group of buildings. The Produce Exchange was, for many years, the largest brick building in America, and still holds its own, both in size and in architectural merit, among the great structures of the Metropolis. Mr. Vanderbilt's house, although not then nor now the largest private residence in New York, is still one of our most beautiful private city houses, and a dwelling of quite unusual architectural grace. The Dakota well holds its own among the gaudy and ornate splendors of later apartment houses. The Eden Musée is an excellent type of the contemporary French architecture of its day. The Navarro Flats are certainly imposing and are more restrained in treatment than it is likely they would be were they to be built to-day. They constitute an interesting group of buildings that, notwithstanding the vast changes in New York architecture since they were built, is still interesting and important.

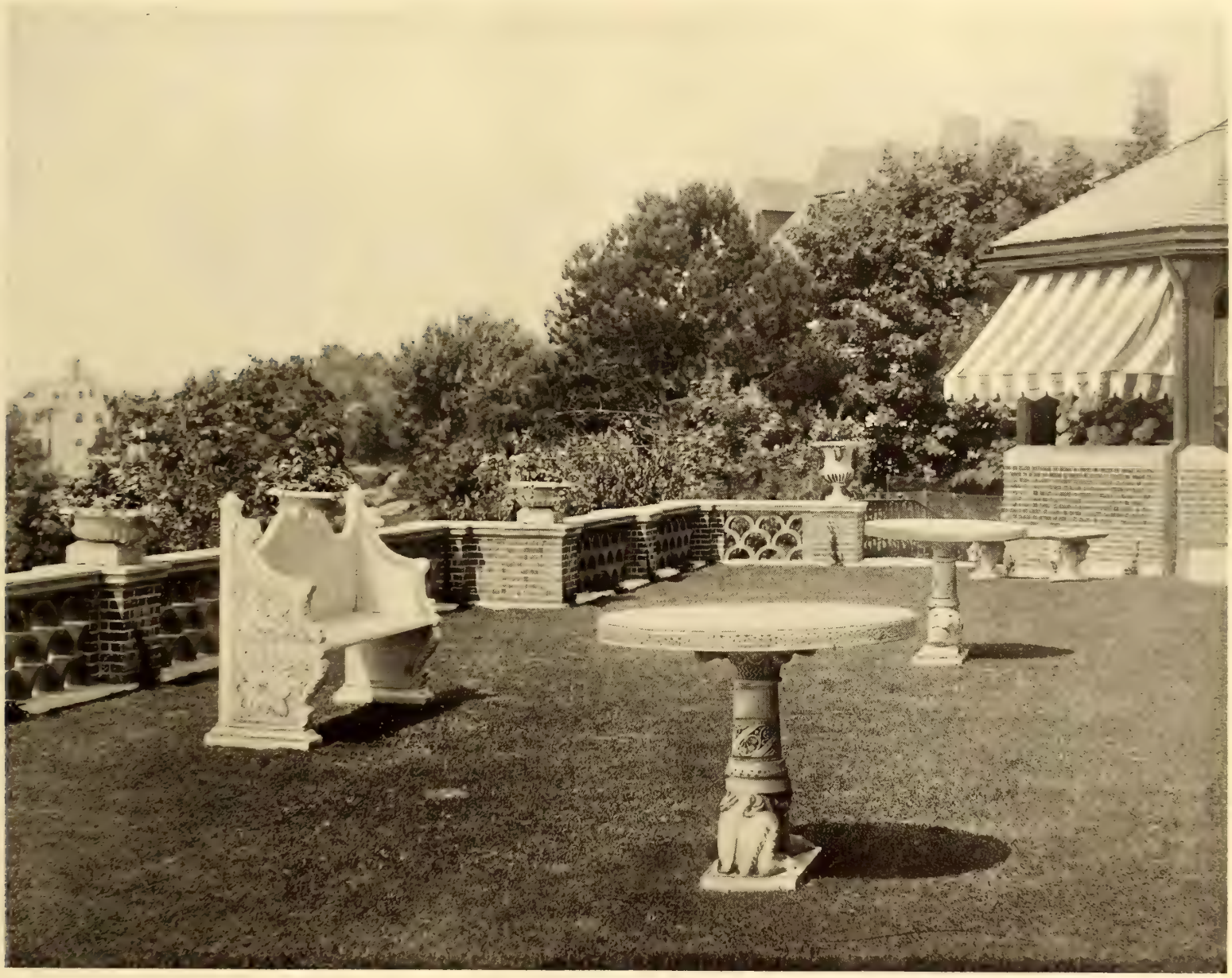
Notable American Homes

By Barr Ferree

"The Rocks," The Country Seat of Eben D. Jordan, Esq., West Manchester, Mass.

A PICTURESQUE place, picturesquely situated, is a rapid but quite accurate description of Mr. Jordan's extensive country seat at West Manchester. In reality it is much more than this, for its picturesque quality is at once studied and natural. It is studied, in that the utmost advantage has been made of the natural surroundings; it is natural, in that the organic beauties of the site—the elements of natural attractiveness that determined the erection of a building on this spot, and the development of a large country estate here—have, in their turn, been correlated to the house, the grounds and other buildings.

These matters are quite essential to the well-being of a house from an architectural standpoint, and they are fundamental truths that are very excellently illustrated in this fine dwelling. The landscape at once determined the general style of the house and gave it its name. A vast pile of rocks, thoroughly picturesque as such natural formations invariably are, bound the water side of the estate, beyond which are the deep waters of the Atlantic. Further inland is a magnificent forest. These two features constitute the great natural charm of the estate, and the charm of each is not only great of its kind, but the immediate juxtaposition of such diverse developments of nature is itself beautiful and impressive. Quite naturally, therefore, the rocky formation gives the name, "The Rocks," to the estate; quite naturally the house is placed on the furthest verge of the land, immediately overlooking the sea; and quite naturally a thoroughly picturesque style of architecture was chosen for the building, very happily in keeping with the irregular character of the surroundings.



The Terrace

The house is reached by a splendid avenue that approaches it through grounds laid out with fine taste and kept in beautiful condition. It leads immediately to a spacious forecourt, where a flight of stone steps is the approach to a terrace, grassed and planted in the Italian style and containing carved marble seats and tables. Verandas on either side bring the house onto the terrace, one of them serving as an outdoor living-room.

The house is built of rough-faced red brick with Indiana limestone trimmings. The upper story is chiefly in half-timber work. The Elizabethan has been chosen for the

"The Rocks"—The House

"The Rocks"—The Hall

"The Rocks"—The Dining-Room

"The Rocks"—The Drawing-Room

architectural forms, and the materials and style are admirably adapted to the picturesque landscape in which the house is situated. Rampant lions on columns on either side of the main doorway are both ornamental in themselves and sufficiently dignify the chief entrance.

Toward the sea the house presents an ensemble of half-timbered gables, deeply sloping roofs, massive chimneys and retreating and projected masses; harmoniously combined, it is true, but offering that varied quality of form and outline which is properly in keeping with the natural scenery in which it is placed. The sea front is, in truth, a clever adaptation of the regular to irregular effects. The salient features of the house plan stand out in the two projections whose gable ends form the distinguishing characteristics of this front. One of these gables is broken by a chimney whose massive base rises in strongly cut recessings until a tall group of chimney stacks cleaves one side of the gable just below its apex. It is a daring device, because while the chimney begins fairly in the center at the lower floor, it ends at its top quite markedly to one side. This means an irregularity in design which if it had not a merit of suitable adjustment to the interior might very well be put down to a vagary of the designer. As a matter of fact it gives a great chimney-piece in the center of the first-story room; in the second story the chimney is developed somewhat to one side, so that the end has two windows on one side of the chimney and one on the other; in the gable the chimney passes wholly beyond the recessed balcony and window, which forms the feature of the gable, manifesting very clearly the subordination of the fireplace to the admission of light and air to the rooms.

"The Rocks"—The Staircase

"The Rocks"—A Chamber

The other gable is treated with even greater boldness and a quite startling disregard of the demands of symmetry. The whole of this front is broken on one side by a great semi-octagonal projection whose roof without windows is cut by the main gable and whose other roof on the side is cut again by a still lower gable which surmounts its wing. It is needless to say that there is absolutely no unity between the chimney of the one gable and the semi-octagon of the other, and yet they have this in common, that each is applied to the corresponding part of the main building, and hence each contributes its own quota toward the effect of the whole. That a similarly shaped porch partly cuts the base of the chimney possibly helps in restoring the sense of symmetry which, after all, is the prevailing feature in this front, notwithstanding a great dissimilarity of its various parts.

These portions form what may be termed the furthest projection of the house, which, being of great size, is from this side apparently of great depth and extent. This apparentness is, of course, very real and true, for the house is in every sense of great size. Thus the central part, whose chief features have just been noted, is flanked on either side by further buildings; on the left by a great open porch with a semi-octagonal end whose pointed roof rises into the gable of the main building. On the other side the structure is greatly developed with gables and porches, forming a fine series of recesses and expanded parts.

The great feature of the sea front, after all, is the terrace that rises directly above the rocks from which the place derives its name. This is a grassed spot built within a retaining wall of stone on which is a balustrade of small superimposed arches, with brick piers surmounted with base. Tables of carved stone, benches and other garden furniture of Italian origin gives a distinctive character to this terrace.

A spacious hall serves as a delightful and inviting entrance to the house. It is paneled throughout in dark old English oak. The chief ornament of the cornice is a handsomely carved band arranged in panel-like divisions. On the left is a large stone fireplace and mantel, and to the right is the staircase leading to the upper parts of the house. Very elaborate indeed is the carving of the stair balustrade and that of the balcony from which it rises. Great chairs are placed here, so spacious are the dimensions, and the furniture of the entire room is of a rich and ornate description. This consists chiefly of genuine old English oak, but includes, among some other pieces, some chairs of Italian origin. This room, of course, serves both as the entrance to the house and as the apartment from which the other rooms are reached. It is, quite literally, the focus of the whole dwelling.

The dining-room is paneled in mahogany, the panels being alternately large and small above a paneled base. The room is divided into three great parts by massive beams supported by Roman Ionic columns and pilasters. In the central division one side is filled with a marble mantel. The furniture consists of fine examples of Chippendale, and the paintings hung against the panels are chiefly old portraits. A semicircular sun parlor opens from this room to which the green and white draperies give a cool and delightful charm.

The billiard-room, like the dining-room, opens directly from the hall, and is the first of a superb suite of apartments. The walls are paneled in wood to a deep frieze, which is carried wholly around the apartment, and which is painted in sea scenes. On one side is the fireplace, with an ingle nook immediately adjoining it. A great carved settle and massive chairs stand on the platform overlooking the billiard table.

Beyond the billiard-room is the music-room. It is reached by descending a few steps and passing through a passage lighted by leaded windows. It is paneled in white, relieved with green silk hangings beautifully embroidered. The elaborate mantel is faced with onyx and has a hearth of the same rich material. A reception-room, which may be directly reached from the hall, opens from the music-room. Once more the walls are paneled, the upper panels and the upper part of the narrow strips on each side of the mantel containing delicate floral ornaments. The furniture is of satin wood with pink coverings. The den, which is intended for Mr. Jordan's exclusive use, is furnished in green and white, a combination of colors so general throughout the house as to be quite predominant. The fireplace, on each side of which is a bookcase, is of red glazed tiling. The furniture is old English in design.

The upper floor is, of course, given up to suites of bedroom, provision being made alike for the family and for many guests. Each suite has a definite character of its own, and is finished and furnished in a distinctive manner.

Japanese Wistaria Arbors

JAPAN is truly the land of flowers. A rapid succession of lovely bloom marks the march of the season, each succeeding one another so quickly that there is no time for " between seasons," each so predominant in its color-note, so penetrating in its beauty, so ravishing in its loveliness, that one's admiration is baffled by the entrancing beauty of Japanese landscapes and wonder at the variety and completeness with which each flower succeeds one another.

The cherry blossom is succeeded by the wistaria toward the end of April and the beginning of May, and the arbor of every tea-house is forthwith hung with masses of purple clusters, while the surrounding hills and fields are ablaze with soft-flowered and luxuriant azaleas.

At some of the larger places, says Mr. George G. Rittner, in his interesting " Impressions of Japan," where tea-houses are prominently placed along the roadside, can be seen those wonderful arbors of wistaria, purple and white blossoms hanging down in masses from the trellis-work above; sometimes whole verandas surround the houses, literally covered with this magnificent flower. To sit underneath one of these arbors and admire the surrounding country is enchanting. No sun can penetrate the trellis-work on account of the masses of flowers, and later on account of the covering caused by the thickly grown leaves. Under these bowers one can sit all day watching the streets with their interesting people passing, or the gardens magnificently laid out and wonderfully well kept. It is almost impossible to find a weed on the grass, or an ugly twig on a tree. The tea-house keeper probably takes a morning constitutional with his family around his garden, to see whether the night has brought out anything to offend the most critical, and, if so, that offending twig or weed is plucked up and thrown away where it can never again make itself objectionable.

A very charming view of wistaria arbors near Tokyo forms the frontispiece of this number of AMERICAN HOMES AND GARDENS. It is a beautiful and bewitching picture, although the architectural forms are of the slightest. But the wonderful beauty of the wistaria blossoms, and the quiet flow of the water make a scene of singular beauty, to which the quaint figures of the Japanese men and women, in their brilliant clothing, give the human interest.

"Kingdor." A Swiss Chalet

At Summit, New Jersey

THE house of Paul Gaderbush, Esq., at Summit, N. J., to which has been given the picturesque name of "Kingdor," is based on a Swiss chalet.

The terrace at the front is built with a stone foundation of rock-faced red sandstone laid up at random. Above this stonework the balustrade is enclosed with a wall of brick. The remainder of the underpinning of the building is built of similar stone. The first story is stuccoed and the second and third stories are covered

"Kingdor"—The Staircase

with shingles. The beams and trimmings are of cypress finished with a treatment of brown stain, very soft and dull in tone. The shinglework is stained a lighter shade. The roof is covered with shingles left to finish a natural silvery gray color, which sparkle most brilliantly in the sunlight. The piazza, at the side of the house, is enclosed with glass in the winter, and forms a sun-parlor.

The interior throughout is trimmed with gulf cypress and is finished in its natural color. It is protected with a wax-finish which reveals the greater beauty of its grain.

The hall has a large vestibule with a paneled seat. The remaining space at the side of the vestibule is taken up with a coat closet. There is a beamed ceiling and a staircase of good design, which is lighted by a cluster of small leaded glass windows on the main landing.

The drawing-room is treated in an unique manner. It has a wainscoting, formed of cypress battens placed perpendicularly, to the height of four feet, and then finished with a plate rack. These battens, placed as they are, form panels, which are plastered in a rough manner and tinted in harmony with the color scheme. The ceiling is finished with a wooden cornice. This room has an open fireplace built of pressed brick and terra cotta, with an ornamental mantel of similar brick and terra cotta. Bookcases are built in at one side of the room. The library opens into the conservatory, and it is furnished with a similar wainscoting and fireplace as the drawing-room.

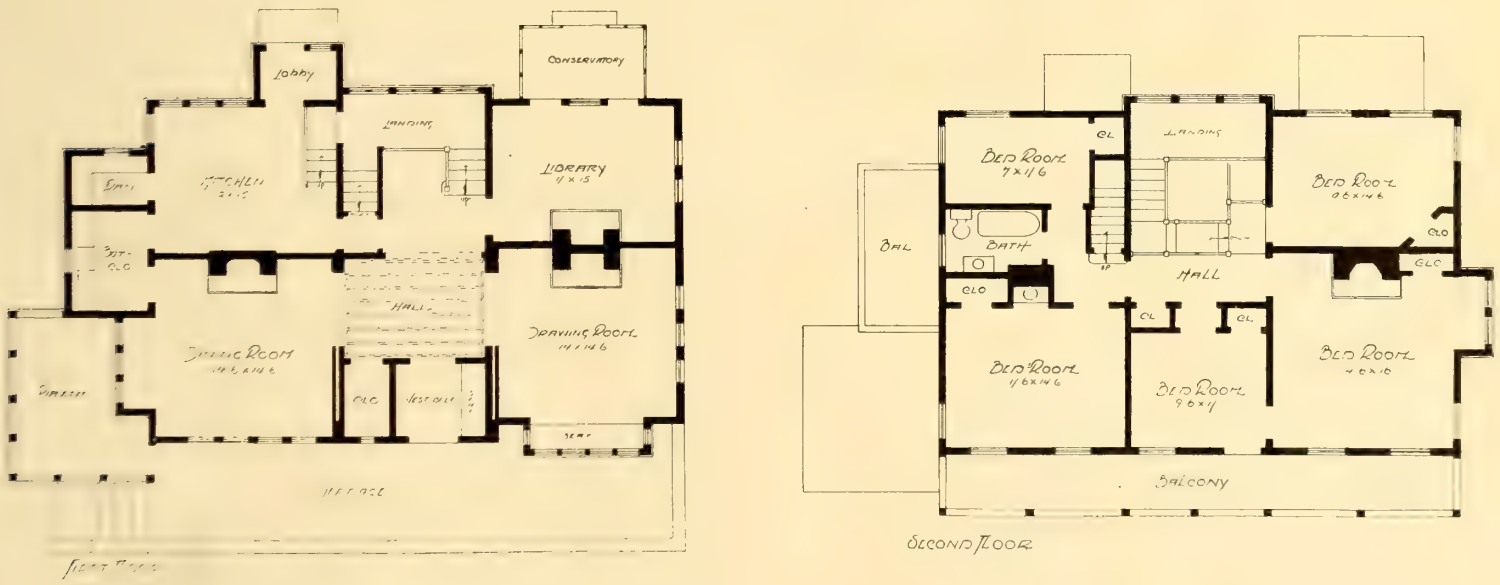
The dining-room, to the left of the entrance, is furnished with a paneled wainscoting, wooden cornice and plate rack. An open fireplace is built, with brick facings and hearth, and is fitted with a mantel of cypress treated in the Swiss Gothic style. The wall space above the plate rack is covered with paper in tapestry effects. The butler's closet is well fitted, and has a sink, dresser, closets, etc. The kitchen has a large

"Kingdor"—Fireplace

store pantry, a lobby large enough to admit ice box, and all the best conveniences.

The second story contains five bedrooms, with well fitted closets, and a bathroom, furnished with porcelain fixtures and exposed nickelplated plumbing. The attic contains the servant quarters and bath, besides ample storage space. A furnace, laundry, fuel room, cold storage space, etc., are placed in the cellar, which is cemented.

Mr. John Wheeler Dow, architect, Wyoming, N. J.



"Kingdor." A Swiss Chalet at Summit, New Jersey

The House of Sherman Evarts, Esq.

Plainfield, New Jersey

THE house of Sherman Evarts, Esq., at Plainfield, N. J., is the subject of these illustrations. The building is square in form, and the detail is of the Colonial style. A feature of importance is the terrace extending across the front and terminating into a piazza at either end. The detail of the front entrance is particularly good, and its broad doorway, with its narrow windows on either side glazed with leaded glass in an old Colonial pattern, its fluted pilasters with Ionic capitals, and its massive pediment which surmounts the whole, is excellent. The house is built with a red brick underpinning and a shingled exterior of natural cedar shingles. The trimmings are painted white.

The hall, which is a central one, is trimmed with white pine treated with white enamel paint. It contains an ornamental staircase of Colonial design, with a broad landing and a paneled seat, above which there is a cluster of stained glass windows shedding a soft and pleasant light over both the upper and lower halls.

The living-room is trimmed with chestnut stained and finished in a dark Flemish brown. It has a beamed ceiling and a baywindow with paneled seats. The fireplace is built of pressed brick, laid in red mortar, and the whole is finished with a mantel. The walls are covered with a dull green burlap with good effect.

To the right of the entrance is the library, which is trimmed with pine and painted black, while the walls are covered with crimson burlap, the whole finished with a wooden cornice. There are bookcases built in and extending around the room, and an open fireplace with pressed brick facings and hearth, and a very good mantel.

The dining-room is treated with white enamel, and has a bluish-gray wall covering above the paneled wainscoting, which is finished with a wooden cornice. The room is octagonal in form, and in order to make it a complete octagon a china closet has been built into one corner and provided with leaded glass doors. The open fireplace is built of brick, and has a mantel of Colonial style. The butler's pantry is fitted with all the best modern conveniences, including a sink, dressers, drawers, etc. The kitchen and its dependencies are also well fitted in a similar manner. Special care has, throughout, been lavished on all the mechanical equipment.

The second floor is trimmed with white enamel paint, and contains four bedrooms and two bathrooms, besides two servant bedrooms and bathroom, which have been placed over the kitchen extension. The bathrooms are treated throughout with white enamel paint and are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains two bedrooms, trunk room and a children's playroom. The laundry, heating apparatus, fuel rooms, etc., are placed in the cellar.

A Colonial Doorway

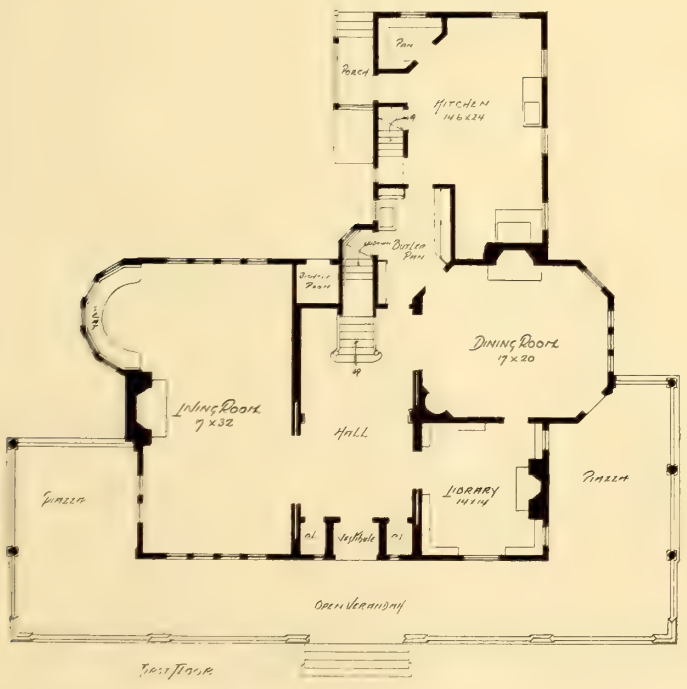
House of Sherman Evarts, Esq., at Plainfield, New Jersey

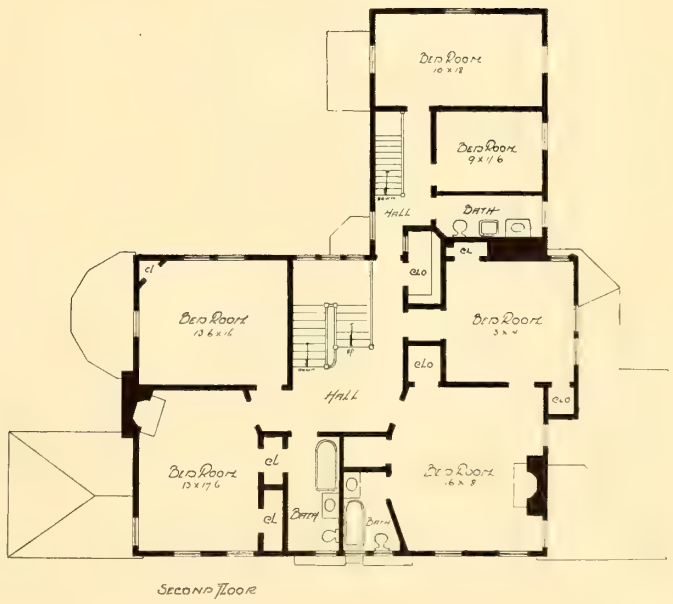
It is quite easy to see, from this rapid description, what is the element which makes this house at once agreeable and comfortable. This is, without doubt, its simplicity. It is a straightforward direct design, unencumbered with unnecessary architectural details, yet conceived in quiet taste.

The doorway forms quite naturally the chief ornamental feature of the entrance front. There is, indeed, nothing else; for the windows are without emphasized treatment, although the group of four on the living-room side is in pleasant contrast with the single window placed in the front wall of the library.

This window treatment of the first story is the single instance of variety in the whole window scheme. Those of the upper story are quite symmetrical; the central windows while different in shape and design from the others are direct expressions of the interior. The dormers in the high sloping roof once more carry out the idea of simplicity which is the predominating quality of the design. And this is true of the whole house; the massing of the parts, the broad sweep of the porches, the ensemble, is eminently simple and direct. It is obviously a livable house.

Mr. John P. Benson, architect, Windsor Arcade, Forty-seventh Street and Fifth Avenue, New York.





House of Sherman Evarts, Esq., Plainfield, New Jersey

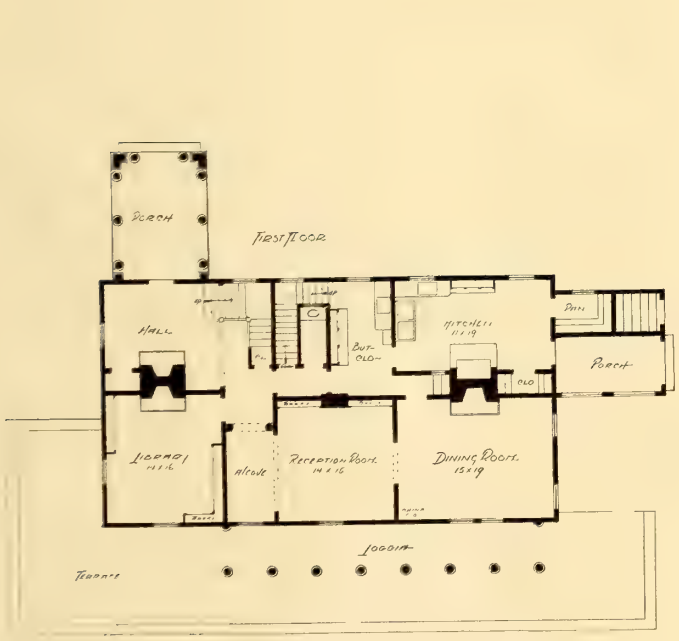
"Hilhouse," the Italian Villa of Floyd Ferris, Esq.

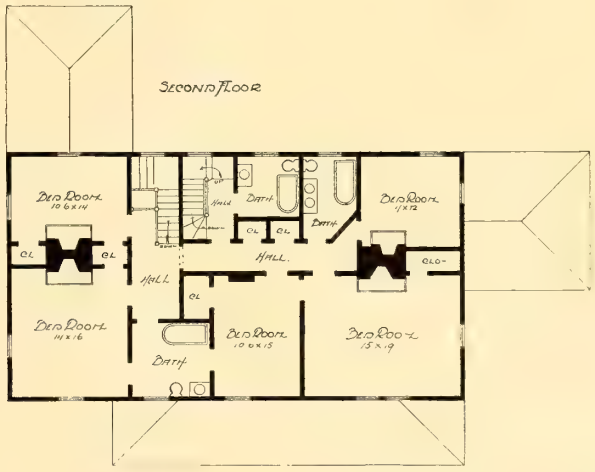
Hartsdale, New York

IT IS doubtful if a more picturesque or attractive bit of country within a radius of twenty miles of New York City, is to be found, than that embraced in the village of Hartsdale, New York. This tract of country is rolling in character and is abounding in well cultivated farms in the valley, from which rises a succession of woodland hills.

Upon leaving the little station at Hartsdale, where the train lands one, the way points toward the fields, and a private avenue, descending slightly to the vale on either side, winds its way to the cross roads, at the junction of which a road to the right rises to a plateau, where it terminates at the entrance to "Hilhouse," the home of Floyd Ferris, Esq. After passing through the gateway, at either side of which there are placed massive stucco columns, a short drive brings

The Porch





"Hilhouse"—Italian Villa of Floyd Ferris, Esq., Hartsdale, New York

one to the entrance of the house. From nearly every room interesting vistas are obtained across country, beyond which is Long Island Sound. The architects of the house, Messrs. Rositter and Wright, have formulated their design after the Italian style. It is well carried out with a simplicity that is beautiful, and the gray stucco walls harmonize well with the green copper roof, with which the house is crowned, blending itself into the varied greens of the over-hanging trees with which the place is surrounded.

The entrance porch placed at the north side of the house and the loggia at the south side form the principle characteristic of the exterior scheme.

"Hilhouse"—A Doorway

The entire house is covered with stucco with its surface left in a rough state, and the whole tinted a dull gray color. The columns to the porch and the loggia are made of cement and molded into form. The ornamental capitals are molded in the same manner, except that they are tinted in the color of terra cotta. The floor of the loggia, upon which these columns rest, is paved with brick laid in herring-bone pattern. The blinds are made of solid wood and are paneled. These blinds, and also the trim, are painted a light apple green. The roof is covered with copper, which has now changed to a mossy green.

The entrance to the house opens into the reception-hall, which is trimmed with white pine and treated with white enamel paint. It has a paneled wainscoting, above which the walls are covered with crimson burlap, and the whole finished with a wooden cornice. The beamed archway is supported on a column, forming the newel post to the staircase, which rises from the reception-hall. The treads and balusters are of white painted pine, and the rail is of mahogany. The fireplace is built with red faced brick for the hearth and facings, and is furnished with a mantel of wood of the Colonial style. The floor is laid with parquetry.

The den, at the rear of the hall, is trimmed with cypress, and is finished with a forest green effect. It has bookcases built in, and also an open fireplace, furnished with brick facings and a mantel. The alcove to the reception-room is separated by an archway which is quite unusual, for it is formed with pilasters which rise to the spring of the arch. The space formed by this archway is filled in with a transom, which is glazed in a geometrical pattern, thereby precluding all draughts, and yet retaining the open effect desired.

The reception-room is trimmed with pine treated with white paint. The floor is covered with a golden brown, in one tone, and the walls are treated similar and are finished with a wooden cornice. Bookcases are built in with latticed doors, glazed with plate glass.

The dining-room is an attractive apartment, and is finished with a white painted trim. The walls are covered with a green and white striped paper, above which the ceiling is finished with a wooden cornice. The fireplace has brick facings, a tiled hearth and an antique mantel of exceptional style of the Colonial period. The butler's pantry, and the kitchen and its dependencies are well located, and are provided with all the best modern conveniences. The rear porch is enclosed with latticework. The loggia at the south side of the house is enclosed with glass in winter, and forms a sunparlor.

The second floor is trimmed with pine and painted white. It contains five bedrooms and three bathrooms. The latter are furnished with porcelain fixtures and exposed nickelplated plumbing. The four principal bedrooms have open fireplaces built of brick and provided with Colonial mantels. The servants' quarters and trunk room are placed on the third

"Hilhouse"—The Hall

floor. The heating apparatus, fuel rooms, cold storage and laundry are located in the cellar.

Mr. Ferris, a student of plant life, has devoted much attention to the development of his garden. The planting has been so arranged that a continual bloom prevails from early spring till late in the autumn. The "rockery" on the slopes of the terrace at the south side of the house is particularly interesting, as well as the garden itself. With a broad open country for its site and an acreage at command, much more is to be done in the building of pergolas, sun dials and settles and the addition of all other necessary accessories for a well regulated garden estate.

"Hilhouse"—The Dining-Room

Fire Protection

The Question of Fireproof

IT IS a good sign of the times that the question of fire protection is receiving very wide attention. And it is no wonder this is so. In the last few years the United States has been visited by a series of disastrous fires, which have been so extensive as to make the terms "Baltimore fire," "Patterson fire," "Rochester fire" and others both descriptive and definite.

These great conflagrations, however, by no means sum up the total fire loss in this country, which, for many years, has averaged millions of dollars in the value of property destroyed, and many more millions in the injury they bring to business and the personal losses they entail which can scarcely ever be estimated in total amounts. But it has been the great fires, like that of Baltimore, which have concentrated public attention on this very important subject. The sweeping away of an entire business section of a great city was a national calamity, and the wider public, which had not hitherto concerned itself with fire losses and their morals, was rudely awakened to the realities of a very great danger.

In the wide discussion of these matters which is now taking place the question of fireproofing takes a front rank. Is the modern building fireproof or only partly so? And if not completely fireproof, why is a certain class of buildings so designated? The confusion in the public mind—the public which knows little of the science of construction and of the progress and experiments made within the last twenty years—is due entirely to a misunderstanding of the word fireproof. As used in insurance, architectural and building circles to-day the word does not mean that a "fireproof" building will not burn, or that it is perfectly capable of resisting fires. It is a word whose meaning is relative only, and rightly so, since inflammable material must, to a greater or less extent, enter into the construction of every building, large or small, public or private.

And the great fires have, most unmistakably, shown the value of such construction. The buildings that have been destroyed have been buildings of the old type, which made no pretense to fireproofing. The buildings that survived have been those built in accordance with scientific ideas of fire protection in the structure itself. Let it be granted, if you will, that this protection is but relative, it has a positive value which much recent experience has shown to be of the highest practical utility.

It can not be long, notwithstanding the greater expense of the fireproof building construction, when this system is also applied to the private dwelling. The demands for this are already loud, and a number of costly houses have been built in the last few years that are actually fireproof in the insurance meaning of the term. Such an extension of fireproof construction will mean much for the safety of lives and property in our large cities.

The Residence of Charles T. Ives, Esq.

Montclair, New Jersey

THE residence of Charles T. Ives, Esq., at Montclair, N. J., is a house designed in the Georgian style of architecture with a portico at the front with massive columns.

The hall and principal rooms of the first story are trimmed with white pine painted white. Entrance to the various rooms of the first story is through broad openings furnished with pilasters and fluted columns supporting arches, which have carved moldings. All the windows are trimmed to correspond. There are no doors in the first story, except from the hall and dining-room. The hall has a four-foot paneled wainscoting, and a wooden cornice. The wall space between has a brilliant wall covering. The fireplace is built with the facings and a hearth of Roman brick, and a carved mantel. The staircase is of Colonial style with a newel post formed of a cluster of balusters from which springs a rail of mahogany. The feature of the hall is the large electric-action pipe organ placed on the first landing of the stairs, and seen from the entrance hall looking through a series of columns and arches. The organ case was specially designed by the architect, and the instrument is played from the music-room.

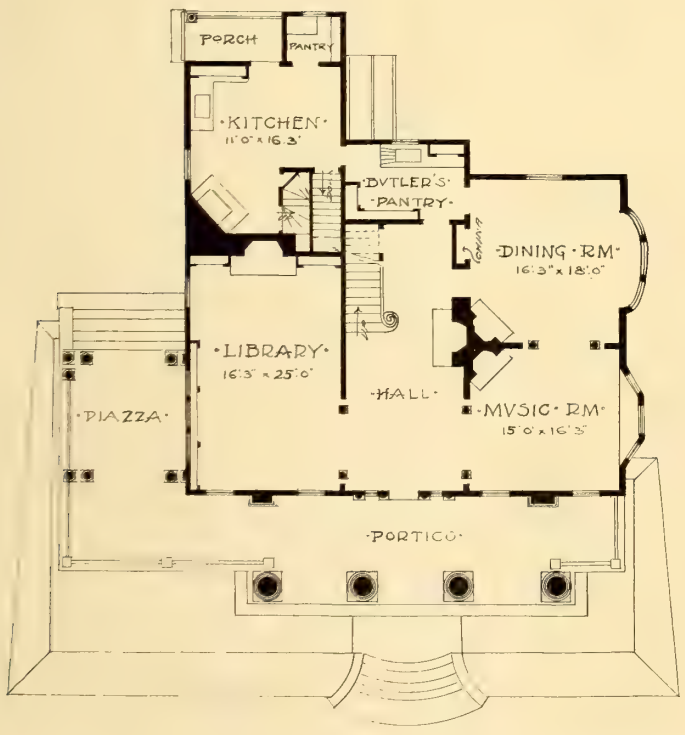
The living-room, or library, contains a number of built-in bookcases, and a mantel that follows the general treatment of the window and door openings. Framed in, above the mantel shelf, is a reproduction of part of the western frieze of the Parthenon. The facings and the hearth are laid with Roman brick. The particular feature of interest in the music-room is the mantel.

The dining-room has a china closet built in, the treatment of which is similar to that used for the mantel in the music-room. The mantel of this room also contains a built-in china closet. Both the china mantel cabinets are lined with mirrors and contain plate glass shelves. The prevailing tones of the dining-room papers are buff and brown. The balance of the first story is occupied by the butler's pantry and kitchen.

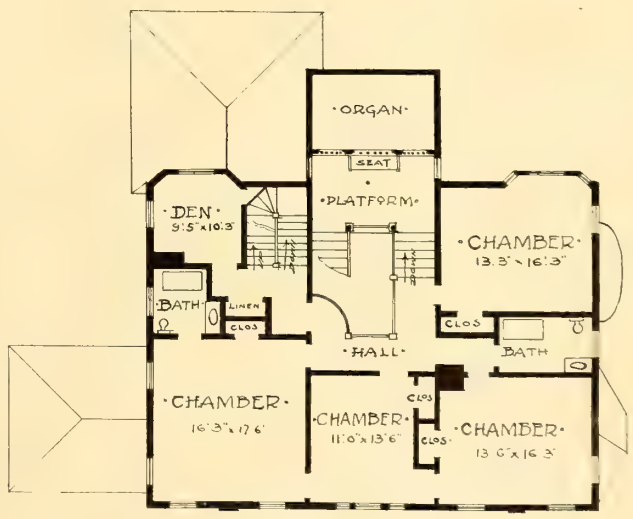
The second story contains four bedrooms, den and two bathrooms. The trim of this floor is of white pine, treated with white paint, except the den, which is in Flemish oak. The bathrooms are furnished with porcelain fixtures, the best sanitary plumbing and nickelplated pipes. There are three large bedrooms, a bathroom and ample storage space on the third floor.

Mr. A. F. Norris, architect, 150 Nassau St., New York.

View Looking Through Hall



FIRST FLOOR PLAN



SECOND FLOOR PLAN

Residence of Charles T. Ives, Esq., Montclair, New Jersey

The Living-Room

The Hall

Residence of Charles T. Ives, Esq., Montclair, New Jersey

"Rock Ledge," the Summer Home of George H. Walker, Esq.

Kennebunkport, Maine

THIS recently completed house has been built as the summer home of George H. Walker, Esq., at Kennebunkport, Maine. The site is a very rocky and rugged one, from which the name "Rock Ledge" is derived. Its rugged cliffs rise high up out of the sea.

The house has been designed in the style of the modern rambling and elongated type, is built out over the rocks, and rests upon stone footings, which have been built and brought up to a proper level for the foundation. The building, blue, green and brown. The house has an average length of 145 feet and a depth of 35 feet.

The entrance has a small porch only, but broad piazzas on the ocean side afford both the view and the privacy needed in a house of this description. The principal living-room, located in the center of the house, with openings on both sides, forms the nucleus of the whole plan, and the den adjoining opens onto a long piazza, for the use of the family, and is so designed and located as to afford ample shelter from the sun, and yet be swept by the prevailing breezes from the southwest. At the other extreme end of the house is the

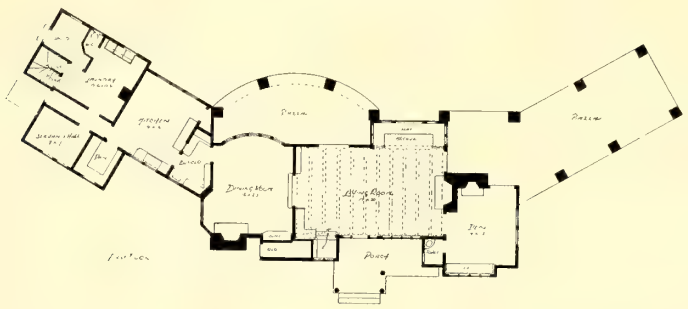
The Entrance

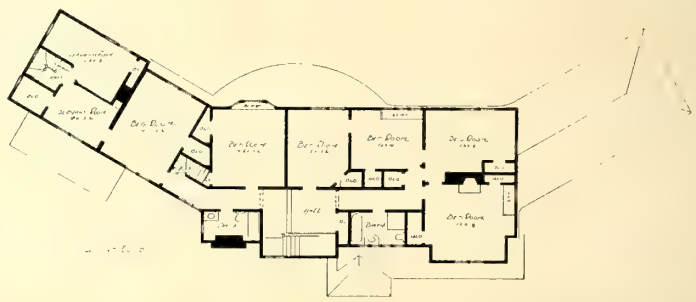
above, is constructed of wood, and is covered on the exterior framework, from the grade to the peak, with cedar shingles, which are stained a soft brown color. The trimmings are painted a dark bottle green. The roof is also covered with shingles and is stained a dull green, with harmonious effect; it blends well into the scheme of color used for the side walls. The columns of the piazza, the terrace wall, and chimneys are built of rock-faced field stone taken from the premises, and are very beautiful in their colors of old gray,

servants' accommodations, which are conveniently placed as to utilize the same breeze to carry off all the cooking odors and smoke.

The living-room is trimmed with yellow pine, treated with stain and finished in a forest green. It has a paneled wainscoting and a beamed ceiling. The staircase, while placed conveniently, is practically isolated from view by the paneled seat with its high back and its ornamental balustrade. On the opposite side of the room there is an ingle nook provided

"Rock Ledge"—The Entrance Front





"Rock Ledge"—Ocean Front

"Rock Ledge"—The Living-Room

"Rock Ledge"—The Piazza

with a paneled seat. The fireplace is built with brick facings and hearth and a mantel. The den has a similar fireplace, and also a window seat. The woodwork is of yellow pine treated in Flemish brown. The walls are treated with battens forming panels, which are filled in with green burlap.

The dining-room, which is placed two steps below the level of the living-room floor, is treated with white enamel paint, and has a paneled wainscoting of the Colonial type. The walls above this wainscoting are covered with a brilliant wall covering, with a white back-ground showing a large green figure, and the whole finished with a molded cornice. The fireplace is built of red brick laid in white mortar, with the facings and hearth of a similar brick and a mantel of Colonial style. On one side of the fireplace is a buffet built in, with cupboards below the counter shelf and shelves above, which are enclosed with leaded glass doors and the whole trimmed with bronze furnishings. The circular baywindow at the opposite end of the room is well placed, from which a view is obtained up and down the coast.

The butler's pantry is well fitted with sink, drawers, shelves, etc. The kitchen is planned with ventilation at both ends, and thereby provides a very cool and comfortable kitchen. It is fitted with a sink, counter, range, store pantry, well fitted laundry shed, for the storage of fuel, and a servants' dining-hall, which is a necessary adjunct to the well appointed house.

The second story is treated with white paint, and this floor contains six bedrooms, two bathrooms, besides two servants' bedrooms with a private stairway to the kitchen. A feature of this plan is that the hall is kept to the front so that the principal rooms face the ocean. Some of the bedrooms have paneled seats, open fireplaces, and all are treated with artistic wall decorations. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the trunk room and several extra rooms.

Messrs. Chapman and Frazer, architects, 8 Exchange Place, Boston, Mass.

Helps to Home Building

Furnishing the House

THE house built, it remains to furnish it. To many persons, and rightly so, this is not a task, but a pleasure. It is the portion of home-making that seems to fall especially to the women, and as an opportunity for the practise of the art of shopping it is clearly unrivaled. As in all the stages of home building and home making, the utmost patience is required. It is a work that falls naturally and by right to the owner.

The furnishing of a house is a task that should be attacked with enthusiasm and pursued with leisure. It is the hardest kind of hard work. It requires patience and discrimination; it needs good taste; it demands a knowledge of the uses of furniture, and it necessitates a purchasing taste that many people think they have, but which few really possess. The responsibilities involved are so great that it is, in a very true sense, a big undertaking.

On the whole the home maker who starts entirely fresh, with absolutely no furniture to begin with, has much the better of it. One never knows what to do with old furniture—furniture that is simply old and without the artistic merit and interest of antique furniture. This is especially true when the pieces are good enough to use and entirely too good to be thrown away or converted into kindling. Yet if one has the means to entirely furnish a house from top to bottom it would often be better to throw away the old uninteresting pieces and start afresh in every way.

There is, moreover, a special interest in furnishing a house as a whole. It provides an opportunity for individual treatment such as no other method can give. It is a pleasure, and a very real pleasure, to furnish a room completely; and this pleasure can be repeated several times when a whole house is to be done. But a surfeit of joys is sometimes wearisome, and the work should not be begun lightly. One is very likely to become tired before the job is half done.

Various expedients are at hand for aiding in this task. The architect stands open-handed and ready (for a commission) to furnish your house for you completely, and apply the same care to its internal equipment as he has shown in its design and construction. This is not only an expensive way of furnishing, but it is the most expensive way. Many of the most splendid homes in America have been furnished in this way and have been turned over to the owners in a thoroughly complete manner. The magnificent house arranged for the late Mr. William C. Whitney in New York is a conspicuous example of this style of furnishing. Many other great American houses have been similarly equipped.

This method is, however, quite exceptional, and is only open to the very rich. Yet help from the architect can often be had without going to the expensive extreme to which Mr. Whitney went. His architects ransacked Europe for the costliest treasures of household art, and his palace, when completed, was a veritable museum of rare and sumptuous furnishings. It would be unfair to guess at the cost of this rich equipment, or to surmise the architects' commission; the latter was, unquestionably, very large.

Another aid to furnishing is supplied by professional decorators and furnishers. These folk have flourished amazingly of late years. They will furnish your house as expensively as you please, and, in a thoroughly legitimate business way, charge a stout commission for their services. They earn their money. They employ capable workmen; they have a thorough knowledge of styles; they are in instant touch with the sources of supply, whether the furniture be new or old; and they can, if so desired, produce most elaborate results, results quite as artistic as those produced by the architect, who, indeed, will often transfer this portion of his commission wholly to the professional decorators. An interesting case in point is supplied by the great house of Mr. H. M. Flagler, at Palm Beach, Fla. A well known firm of New York architects designed and built his house, and executed the main hallway; all the rest of it, including the very elaborate public rooms and a most extended series of bedrooms, were executed entirely by a decorating firm, which assumed responsibility for every detail of the interior.

Mr. Flagler's house, and many others which belong to the same class, are, of course, most extensive mansions. They are exceptional houses, decorated and furnished in an exceptional way. The professional furnisher prizes such opportunities, not only because of the satisfaction felt in successfully carrying out large undertakings, but because of the financial considerations involved. It is, however, entirely

possible to have the services of the trained furniture-man without depleting one's bank account. It is simply a question of scale and of money. If one wishes professional advice one must pay for it, and it remains with the client to fix the amount that shall be spent.

The trained furnisher, the man who knows his business, the man of taste and discrimination, can often give advice and assistance that will not only be of special value to the client, but which can be had in no other way. The furnishing of the house has become as much a profession as its building. One needs to know how to furnish, exactly as one needs to know how to build. This is the basis of the professional furnisher's business. He meets a demand, and he meets it—often—with success.

Special makers of furniture, of individual furniture, are a quite modern manifestation of household art. Simplicity and directness, furniture constructed on sound models of art and form are the special characteristic of such products. And very fetching much of this new furniture is. It is handmade and especially made, and excites lively anticipatory joy in the hearts of the artistic purchaser.

The department store, the special sale, the machine-made factory of the West, stand at the lowest limit of furniture helps. Yet these sources of supply have their merits and their uses. A wonderful amount of improvement has gone into the designing of furniture of all sorts in the last few years. The quality of furniture that is brought into our great cities by the car load is distinctly in advance of that which came a few years past. There is no longer a market for heavy, ugly furniture. The taste of the public has improved, broadened and widened. There is but one step further to go, and that is to insist that furniture shall not only look good, but be good. The latter is the quality most insisted on by the special furniture maker.

The chief rule to be observed in furnishing the house is to be harmonious. It is rarely safe to build up a room around a single piece of furniture. No one article should cry aloud for attention; avoid eccentricities; ignore fads. Be sure you are going to like each article, and be sure each article is going to fit in well with each other article. Special styles, especially exotic styles, are very good things to be left alone. One may not always care for a Turkish room or a Japanese parlor, and one certainly can never make them accurate or literal translations.

The house once furnished is likely to remain as deemed completed. One rarely refurnishes a house completely from top to bottom. In most cases the work done once is always done. Hence the necessity for careful choice. The furniture must be good, good in itself, good in its purpose, good in its relations to the room in which it is to be placed. Harmony and good taste are equally essential.

The woman of taste can do much by herself. She knows how her rooms are to be used, and perhaps can look somewhat into the future. She knows her friends' rooms, and wherein they fail or succeed. With patience and care she may furnish an artistic house very artistically. But if she finds she can't do it alone, the best thing to do is to apply to some one who can really help. It is impossible to be too careful in furnishing a house.

Science for the Home

The Dangers of Cheap Houses

THAT cheap houses, cheaply built, are real sources of danger from a constructional standpoint is widely and universally admitted; it is, perhaps, less generally recognized that grave sanitary dangers may result from improper construction, hardly less injurious to human life than a wall that will not stay erect, or a floor that will not support the load put upon it.

The builder who builds in a cheap way stops at nothing whatever to accomplish what, to him, is an economy. If he is not indifferent to life, it is because he knows that the responsibility can readily be brought back to him if his building falls down. If his construction is sound it is only because he is afraid to make it otherwise. He knows, moreover, that most people look more at the things they see than seek for what they can not see. If the walls appear strong and good, he trusts to inefficient work in the hidden parts, careless of what may happen several years after he has ceased connection with the work. Often enough he excuses himself on the ground that his contracts do not yield enough to permit good work, and that he must himself get out as best he can.

He may, for example, place his water supply pipe and his waste pipes so closely in juxtaposition that leaks in the latter may contaminate the water in the former. Both are safely covered up, so why should he care? Nothing may happen; and if it does it may be several years hence, when there may be no house at all; for such dwellings are not built to last long. The plaster may be mixed with substances filled with disease germs and no care whatever taken as to their origin. The bricks may be porous, admitting the external air. Chimneys so built rapidly accumulate soot, which, being damp, falls down when an extra hot fire is set going, and the dangerous fumes of carbon-dioxide and other gases are generated. Drains have been known to be connected with chimneys, admitting poisonous gases to rooms when there is no fire to carry them off. Discharge pipes for the conveyance of sewer gas may not be carried to the regulation height above the building, and chimneys may be so constructed as to be quite inadequate for sufficient draft. Arrangements for ventilation are often completely ignored, and the laws governing the cubic contents of sleeping-rooms are often evaded even in cities which maintain an expensive building inspection department.

In a general sense any one of these things, and sometimes others, are likely to happen where cheapness of construction is the single purpose of the building being erected. Advantage is taken of the ignorance of the public of such matters and to the indifference of the authorities to improper construction. It is much more difficult to evade the requirements of the building law in cities, where the rules are strict and the inspection apparently rigorous, than in rural communities where there is neither law nor inspection. It is a matter difficult to remedy, for betterment can only result from a wider acquaintance of the requirements of good building, and the necessity for good building, than exists at present.

American Garden Statuary

By Harry Dillon Jones

THE use of cement is becoming more and more important, not only to the architect, engineer and builder, but also to the artist, for plastic and sculptural purposes, and few realize that, unlike Italian terra cotta, it can be made to withstand the rigor of our Northern winters and is equally impervious to heat and dampness. With certain treatment, a color, texture and durability is obtained, reproducing to a remarkable extent the old stone figures of another age.

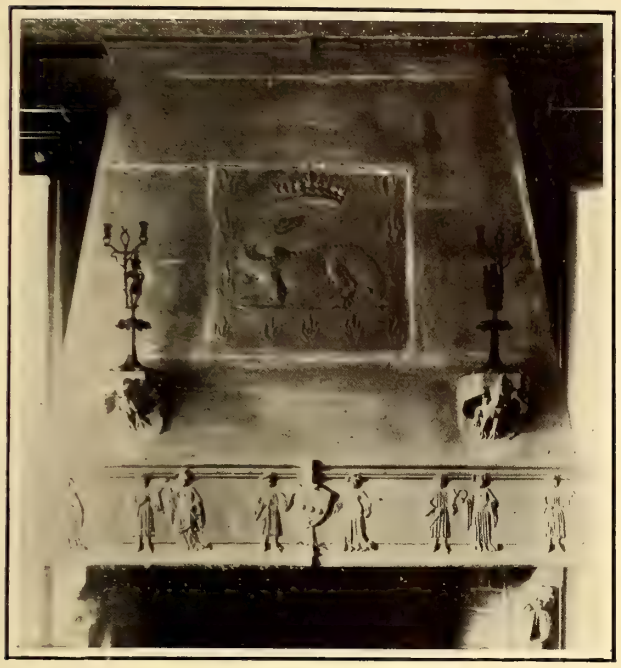
In a recent visit to Mr. W. R. Mercer's studio, in Doylestown, Pa., I was able to convince myself of this. Hitherto, cement for plastic purposes has been of a cold, gray, flat tone, which did not lend itself to the ancient forms and ideas, but after some years of experiment, Mr. Mercer seems to have found a method by which he overcomes this defect. The lover of art is thus able to have within his reach some of the famous examples of ancient sculpture at a naturally much reduced price.

In the studio I saw fonts, urns, busts, bas-reliefs, etc., all destined for the decoration of a garden, which is Mr. Mercer's specialty. In conversation with him, I discovered that one of the great troubles encountered at the beginning of the experiments was the making of a mold that would encase the cement without taking it in so close an embrace as to render its release impossible without breaking the cast. This problem was solved by the use of flexible molds, prepared in such a way as to avoid the repeated failure caused by the casts sticking and the cement not properly hardening before the disintegration of the composition used in the mold.

It is hard to enumerate the difficulties that beset the artist at this juncture. Cement is a non-combustible, hard, very durable and cheap material, which can be cast in a cold state by simply mixing with water—hence its great adaptability to the fine arts. It is, however, less ductile than plaster of paris, and though this difficulty has been overcome by stirring, pressure and other methods of application, its gray color and unsympathetic texture have chiefly repelled the artist. In combating the color certain pigments vitiate the strength of the cement, others do not. Some act chemically upon it so as to transform the tint of the mixture. Certain cements neutralize or weaken when colored more quickly than others, while the rapidity with which the cement dries, whether in the sun or dark, or whether more or less subjected to dampness, will be found

The Figure and the Pedestal are of Cement

American Garden Pottery as Applied to a Pergola



A Cement Reproduction of an Ancient Stone Fireplace

The Workroom, Showing Completed Urns, Vases, etc., Cast From Cement in Imitation of Famous Originals

to influence the color, or even vary the natural gray tone itself. Further, the method of application of the color, whether injected entirely through the cement before setting, applied during setting from the mold, or encrusted upon the latter in a comparatively thin envelope during setting, modified the result.

As to the texture, certain masses of cement, falling upon the earth outside of molds, or hardening inadvertently in

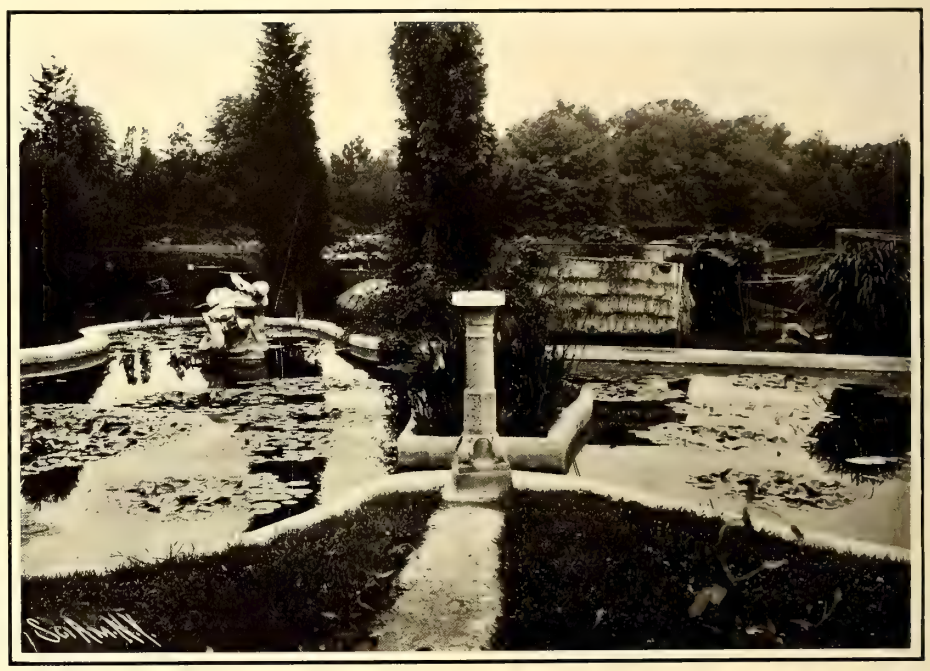
Within the Pergola

A Cement Flower-Box. The Original Has Been so Closely Imitated That Even the Wear of Time Has Been Reproduced

bags and boxes, have assumed this texture of stone, while other masses present a very unpleasing nondescript surface. When molds are used this nonductility of the material requiring stirring may blotch the surface with areas where the finer particles seem to have collected in a sort of paste. On the other hand, when cast too dry, the cavities are not properly filled. Owing to these difficulties the cement will not always take the texture of the mold, therefore one must resort to other means. The mold itself may be encrusted with ingredients which will communicate their texture to the cement, or materials, coarse and fine, may be introduced into the original mixture so as to modify the result. In a word, the cement is merely a glue causing the gravel and sand to adhere to each other, and is used as a medium and not as a base. The process, which any one can work out for himself if he wishes, lies almost entirely in the adding of certain ingredients to the raw cement. The texture and color are matters of workmanship and taste. When the process is learned it will be possible to reproduce almost any work of art with the accuracy of the copies seen in the illustrations. Once the mold is made there is practically no limit to the number of reproductions.

In one of the photographs may be seen in cement a famous Byzantine holy water font, in another is shown an adaptation of a Gothic fireplace in the Musée de Cluny, at Paris. Some of the sun dials were also most pleasing, for they combined utility and beauty in an unusual manner.

I have endeavored in this brief sketch to give some idea of the artistic uses of cement, and no one interested in such matters could fail to be favorably impressed by the result.



A Sun Dial Cast in Cement in Imitation of the Font of Turtles

Plants and Music

HAS music an influence on plant life? A ponderous English review has been considering this question, and is inclined to give an affirmative response. It cites the opinion of a German professor of music, resident in New York, who says: "I have come to see clearly that plants love music as well as sunshine, that they grow more luxuriantly in a studio where there is music, and that the tender buds break more quickly into beautiful blossoms than they do in silence or in discord of sound."

Colonel Andrade, of the City of Mexico, took two healthy growing plants and experimented upon them thus: One flower he blessed, praised its beauty and fragrance; it grew in an atmosphere of harmony and developed rapidly into perfect growth and flowers of brightest color. The other plant the colonel frowned upon, scolded and blamed. It rapidly failed, its growth ceased and within a month it was dead, though in point of physical conditions, such as light, heat, air, moisture, and soil, it was treated absolutely the same as the companion plant.

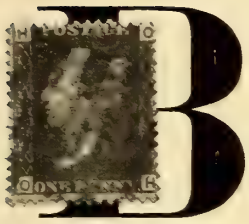
These experiments conclusively prove that plants have nerves. Harmonious, sympathetic vibrations thrill through the vegetable fiber, and excite to anabolic cell-formation, while discordant notes act as a katabolic poisonous agent.

Turning to the insect world, we all know that the hiving of bees is accelerated through the beating of a drum; but recent experiments upon insects have had unlooked-for success in other quarters. Brass bands have been used in America for bringing a plague of caterpillars off trees and in cleansing blight off plants.

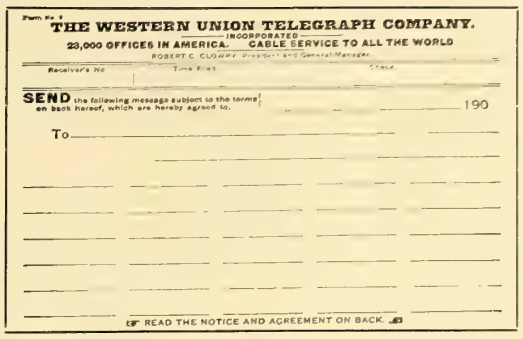
AMERICAN HOMES AND GARDENS does not present these statements as facts, but quotes them from the Westminster Review in the hope that our readers may have some experiences of their own to communicate on this highly interesting theme.

Principles of Home Decoration

By Joy Wheeler Dow



BUT what has the one-penny, English postage stamp, and the Western Union Telegraph Co.'s blank to do with home decoration, is what the reader of these notes will first wish to know. Well, in reality, it has to be confessed that these two illustrations have nothing to do with home decoration. But as the principles which have governed their long use and the principles of home decoration are identical, the postage stamp and the telegraph blank have direct relation with a subject upon which we have read much superficial observation and comment which goes from our memory as quickly as the most ephemeral fiction. Like the genders of French substantives—why some should be masculine and other feminine—the whys and wherefores of good home decoration are never clearly explained, but left to an intuition usually not sufficiently sensitive in the neophyte to act and tell him. Let us see, then, if there be no rudimentary A B C's which we may discover to lead us in the right line of investigation.



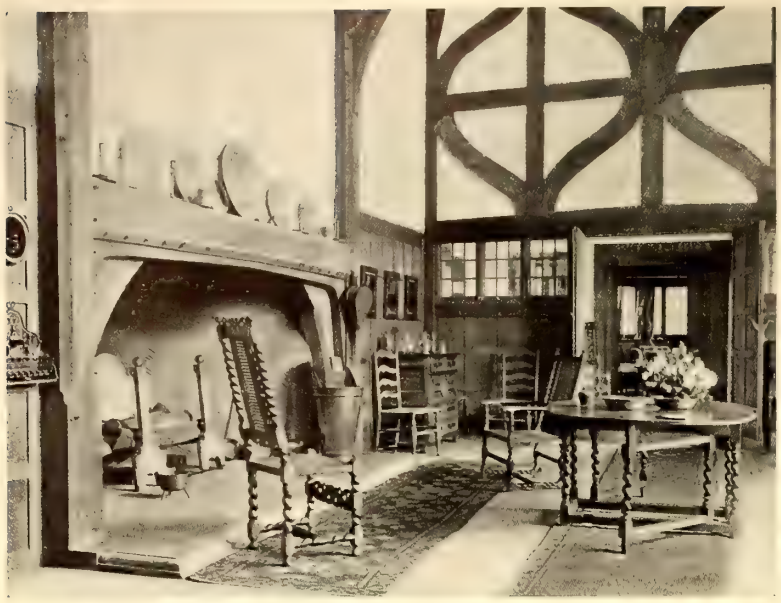
After years of service, in which the one-penny "red"—a faultless postage stamp design—had connected itself inseparably with the history and people of Great Britain, it was superseded by new issues of the Post Office, none of which can compare with its excellence, either inherent excellence or that acquired by personal association. The Western Union Telegraph Co., although in nowise committed to sentiment, knows better than to change its original blanks, which always proved to be good blanks, and to which we are so accustomed. In the art of home decoration the same deductions are the true ones. Whatever has been historically developed and was artistically good at the beginning of its manufacture, that is the article which will always be good and which can not be improved upon by modern invention.

The Decorator's Last Word on the Dining-Room

Fully three-quarters of the household furniture that is offered for sale in the huge furniture warerooms and department stores of this city is hopelessly bad in design, whatever may be said as to the merit of its con-

Oriental Cosey-Corner; or, The Microbes' Delight

The Department Store Atmosphere vs. That of the Home



Anglo-Saxon Home Atmosphere Exemplified

struction. Yet there will be good pieces, too, mixed in with the bad, that even the salesmen themselves, apparently, can not distinguish. The great increase in the number of dealers in antiques does not indicate so much that there are more collectors of antique furniture as it does that the American people are, by degrees, learning to eschew modern invention, and to buy only that which, with good and simple lines originally, has acquired a wealth of personal associations besides, to commend it for everyday companionship. And there you have principle number one.

The collector of antique furniture, pur et simple, is not much affected by these personal associations nor by artistic claims. He buys from the collector's standpoint and interest, as other collectors buy ivory images and fossils, but the man whose highest aspirations are centered in his home life and surroundings—his furniture, like the English postage stamp, must be inherently good in design, with some respectable antecedents behind it to minister to his psychical wants. Hence he would be quite as well satisfied with modern replicas, provided they be well made.

At all times in the history of art there have been false notes struck by artificers not entirely in accord with true Anglo-Saxon home mechanism, and the jarring discord they sometimes produce soon reaches the nerves of the least impressionable people. Take, for instance, that microbes' delight—the Turkish or Oriental cosey-corner. I believe there are still benighted souls who plan these cosey-corners for their homes, but the percentage, I am sure, is rapidly decreasing. And here is principle number two. The reason why the Oriental cosey-corner has become such a disastrous anachronism in the Anglo-Saxon home is not so much on account of microbes, as it is because our immediate ancestors were not in the habit of building seraglios nor of dealing in odalisques. And the atmosphere of the lives of our revered grandparents we must have, or all our efforts in the art of home building are as vanity.

The idea of a cosey-corner is all right in itself, only let it reflect something of our history. See ingle nook in the hall of a house in England. Kindly note the furniture and the placing of it. But can you buy anything as appropriate at the average furniture warehouse? Think of all the highly varnished, modern inventions the salesman will tell you is the line of goods being carried this year, as he expresses it. Perhaps you will be able to recognize some of this fashionable line of goods in photo shown herewith—the two tables and chairs in the foreground—the department store atmosphere vs. that of the home. Tell me honestly, was not that old " one-penny red " the right sort of thing, and the Queen's Post Office Department very foolish to try to improve upon it? In this object lesson we have principle three.

But putting the historical element, so necessary, entirely out of the question, and this year's line of goods entirely out of the question, in which illustration do you find the better furniture designs, the simpler lines, the more restful atmosphere? You may say that the ingle nook from English " Country Life " belongs to a great English estate, and is hardly to be attained by the American of average means. Why not? All the dwellings in England are not as large as this one happens to be, nor are they all as homelike, by any means. I can assure you there is as much ignoble and tawdry furniture displayed in the shop windows along Tottenham Court Road in London as in any of the great furniture emporiums of New York, only I have selected a good English interior. On page 37 are submitted examples of two American interiors which also happen to be good, and may be placed without prejudice, I think, beside the illustration from the English periodical. Note the extremely conservative development in each, the cornice and ceiling treatment in the drawing-room, and in the dining-room the sideboard standing against the unpretentious wall screen, the simple mantel adorned with an old-fashioned banjo clock.

Now, rich people sometimes have extremely poor taste. See the dining-room shown on page 35. Is it not the last word in modern and fashionable home decoration as exemplified by a professional decorator who has no conscience? And I am quite sure you would have not the least trouble in

Another View of the Same Hall

duplicating the effects without the expense of having anything made to order. Just go uptown! most any of the modern furniture emporiums could fix you out in no time. But you

Example of Money and Good Taste Bestowed Upon Conservative Development

can hardly call this sort of thing "homelike." What contrast in the absence of simplicity we find by the English fireside!

Did you notice that combination fixture over the dining table, arranged for both gas and electricity? Turned on full force it would put your eyes out. Think what a disastrous effect the powerful overhead glare is going to have on delicate digestions! Could you not furnish three dining-rooms infinitely better for the same money? Next, let us turn our attention to the fireplace. As you understand the province and usefulness of the fireplace, which do you find is the better exemplification of one—the fireplace in this highly varnished apartment from one of our Western cities, or the fireplace in the illustration from English "Country Life"?

Even our remotest ancestors of whom we have definite information I do not believe ever resided in the land of the Alhambra, making that Mosque motive a distinctly false note in the home of an American as a general rule. Then the glazed-tile hearth will cause you a fit of the blues, reminding one of apartment houses, gas logs and other artificial contrivances. Yet, I am informed that this is the very line of goods that is selling like hot cakes right here in New York City. What shall we do to correct the alarming murrain which threatens among educated Americans, who ought to know better? How shall we get them to recognize that noblesse oblige demands better taste of them?

Even Severity is Often the Charm of a Thing

The Dining-Room of the Past and Present

By Alice M. Kellogg

A BACKWARD glance into the latter part of the eighteenth century gives us a contrasting view of the dining-room of the past with that of the present.

Thomas Sheraton, an English designer of furniture, who helped to make that early period a famous one for the household art of his country, described a " dining parlour " of his own furnishing as having " a large glass over the chimney-piece, with sconces for candles. At each end of the room a large sideboard nearly twelve feet in length, standing between a couple of Ionic columns worked in composition to imitate fine variegated marble. In the middle a large range of dining tables standing on pillars with four claws each." The general style of furnishing, he concludes, " should be in substantial and useful things, avoiding trifling ornaments and unnecessary decorations."

Sheraton Sideboard, Showing the Effect When Placed Before Tapestry Paper Hangings

A Hepplewhite Sideboard in an Old Colonial Room in Salem, Mass.

The compartment is closed by a flexible sliding partition. Observe the attractive effect of the mirror and the old silver

Sheraton's ideas and ideals for the dining-room were in accord with those of other English cabinet workers, Chippendale, Robert Adam and his brother, Heppelwhite and Shearer, each of whom contributed his individual touch to the different articles of furniture.

A plain side table, without a drawer, was Chippendale's introduction to the sideboard that was invented in later years by Thomas Shearer. " This piece of furniture, by its great utility," said Hepplewhite, " procured for it a very general reception, and the conveniences it affords render a dining-room incomplete without a sideboard." Sheraton and Heppelwhite, with its originator, lavished each his utmost skill on the construction of the sideboard, and with so true an art that our present generation returns to their models for inspiration.

The characteristic marks of the Sheraton sideboard are similar to the well-known lines of the Louis XVI furniture, both showing a reaction from the overloaded ornament of the earlier French reigns. The slender fluted or square legs, brass railings at the back, plain front and trim outline of the Sheraton sideboard have combined to make it, as some one says, " the acme of stability and refinement."

To Hepplewhite the sideboard offered an opportunity not so much for creative work as for presenting for the need of the hour the patterns that were most in vogue at that time, with certain practical devices of his own for interior arrangements. Our own careful contrivances for meal-time comfort are not so startlingly new when we compare them with those that were provided for British homes of the eighteenth century by Heppelwhite.

In the graceful serpentine-front sideboard, with concave or convex doors, ornamented with delicate inlaid lines, there were drawers for storing table linen, compartments for wine bottles, and a slide to pull out to form an extra shelf for serving. A knife case, too, was also devised for the top of the sideboard, sometimes made of mahogany, sometimes shaped in copper that was painted and japanned.

Various accessories for the sideboard—coasters on which to rest the decanters, spoon holders, tea chests and tea caddies, cellarettes or wine coolers—were not overlooked in this period of house furnishing.

A Sheraton Sideboard in a New England Home

In 1780 an advertisement appeared in the New York Gazette in which attention was called to the fact that the sideboard was coming into fashion and would soon take the place of the plain side table. This statement was due to the colonists bringing over to this country their household belongings, and the sideboard naturally occasioned considerable comment.

When Washington lived in Mount Vernon, his dining-room was furnished with a mahogany sideboard, two knife cases and a large case, two dining tables and a tea table, an oval looking-glass and ten mahogany chairs. The floor was covered with a carpet, the windows were hung with curtains, and the fireplace was fitted out with brass andirons and firepieces.

used in this way, the extra tables were placed against the wall for serving.

The choice, at the present day, in extension tables often leaves the home-maker in doubt as to their being an artistic triumph, for the pedestal that is used in the center as a support is often aggressively ugly, and when severed in half to introduce additional leaves its appearance is still more objectionable.

The disadvantage of the center pillar is obviated in another style by two legs supporting the center of the table, with a leg at each corner. This arrangement suits the Sheraton and Heppelwhite sideboards better than the carved center pillar.

The corner cabinet for china may be classed among

Colonial Dining-Room in a Seaside Residence

The Sideboard and Serving Table are more than a hundred years old. Note the plate rack for Staffordshire blue ware and the corner cupboards filled with old china
The Colonial atmosphere is faithfully preserved even to the old-fashioned rag carpets, especially made for the room

A late Colonial, or early nineteenth century, style of furniture traced its beginning from the Empire school that Napoleon founded, and dining tables and sideboards were made in heavy shapes and with massive carvings. A few genuine pieces of the eighteenth century English furniture and others of the early American make have been handed down to our time; but these are so rare that, to meet the eager demand for the old forms, reproductions must be manufactured.

The dining table of our forefathers was made with drop leaves at the ends. For a very extensive entertainment two such tables were joined together. Another fashion that was a forerunner of our modern extension table was to join to the center table two side tables, one at either end, and when not

Thomas Sheraton's list of "substantial and useful" articles for the dining-room, and when it is built on suitable lines it contributes to the good effect of the room.

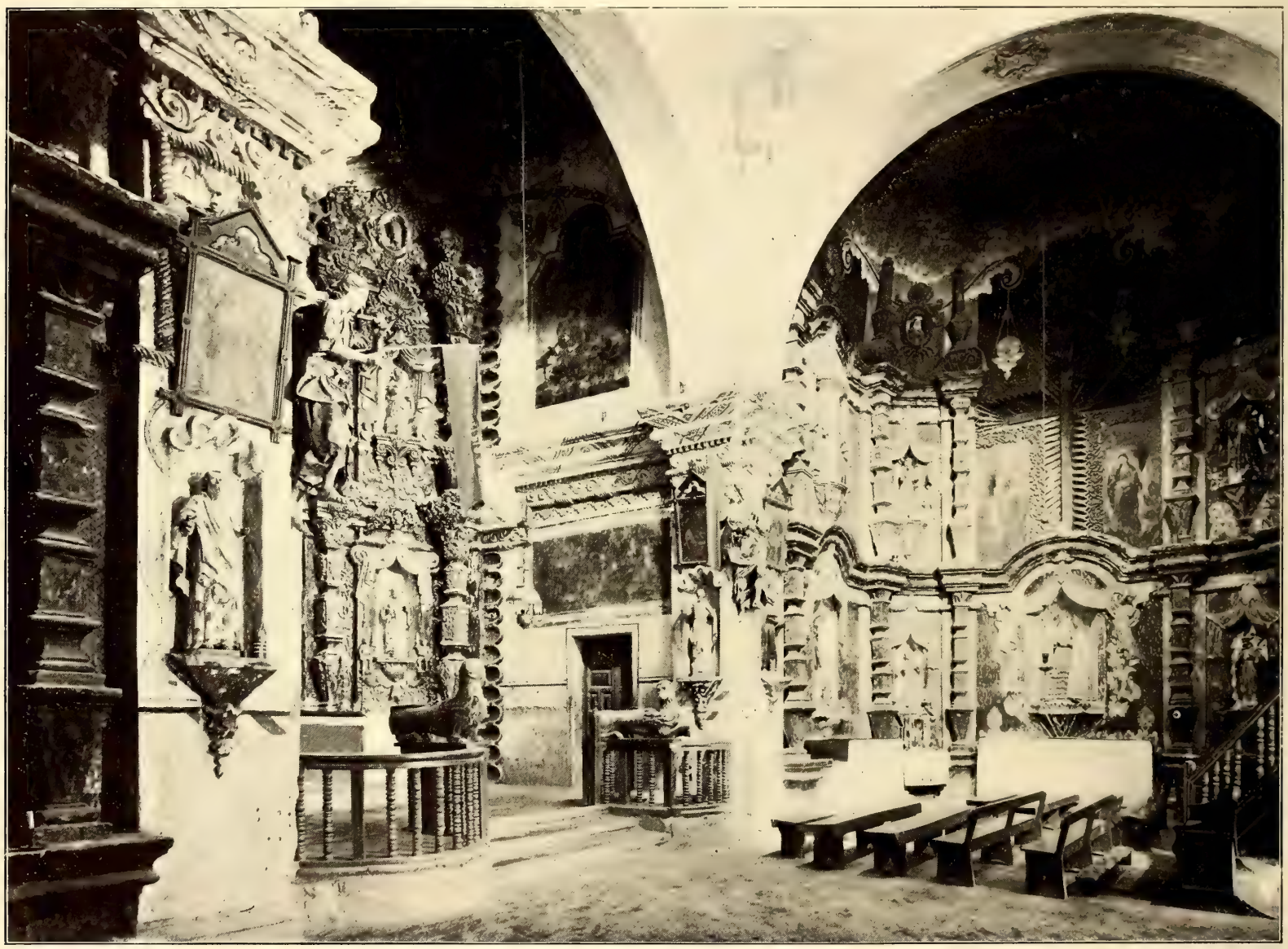
In homes of moderate cost, the conventional rules for the fitting up of a dining-room may often be relaxed and simplicity and interest be the dominant expression. The furniture may be procured in the unfinished wood and painted to correspond with the woodwork in some pleasing color. The floor may be covered with a rug that is woven in the old-fashioned rag style, with selected material of harmonious tones. The window light may be subdued by dainty stuffs that are not listed among the regular curtain materials. Shelves for a collection of old china or family silver may be fitted in some jog or angle of the wall.

The Spanish Missions in Texas and Arizona

By Charles F. Holder

THE early history of Spain in America is of dramatic interest, and can not be read even casually without arousing admiration. What more unpromising region than Texas in 1532 could be imagined? Filled with hostile Indians, its possibilities absolutely unknown, its coast forbidding, few would have essayed it. But this vast region, with its extremes from torrid deserts to cold northers, was crossed and recrossed by many adventurers—to internal dissensions it was a failure, and nearly the entire party lost their lives. The French and Spanish sent out many expeditions in rapid succession, and as a result a number of forts and missions were established, the latter in some instances remaining to-day as striking ruins.

One of the interesting missions of the seventeenth century was established through the influence of Viceroy Galve, who sent Leon on an expedition into Texas with the view to the establishment of missions. The Fathers were from the College



The Interior of San Xavier Mission, Arizona

Spanish and French—who left as their only monuments some of the most interesting ruins in America.

One of the first Spanish governors of Texas, as early as 1692, was Domingo Teran de los Rios, and one of the first Friars to enter Texas, Antonio Olivares, who, after a march as far as the River Frio, reported to Bishop Galmido and was sent to Mexico for aid, hoping to extend the chain of missions across the Rio Grande. Texas at that time was unknown; it had no name, and was a part of Florida in a general sense; and what bravery and tenacity of purpose was required to penetrate such a country can readily be realized. The expedition of La Salle is famous in history. Its object was to settle the country and convert the natives, but owing of Santa Cruz of Queretaro, and were Franciscans. In 1690 they established a wooden mission near the Trinity River, and called it San Francisco de los Tejas. Padre Foncubierta was made president, and with a few men, horses and some provisions, he began the work of converting the Tejas natives, whose name was adopted as the name for the modern State. Orders were now given Governor Teran de los Rios to make a study of the entire region, pacify the natives, and establish eight missions, for which purpose nine Franciscans were brought from Mexico. Another mission, Jesus Maria y José, was built, but the work of proselyting did not progress, because some of the priests had died. Drought, heat, sudden changes in the weather, the hostility of the Indians,

all combined to discourage the work, and finally, in 1693, the Government, disgusted at the long series of disasters, recalled the missionaries, and the priests, after burying the bells, retreated to Coahuila, thus ingloriously ending another attempt of the Spanish to occupy Texas.

Most of the missions were of the type shown in the accompanying illustrations, and were made of stone, wood, or adobe, and some of pretentious architecture, provided with bells shipped from Spain to Mexico. For some reason, the many missions of Coahuila, the neighboring province in Mexico, were much more successful, probably because here were more presidios and more soldiers to keep the Indian converts under rule. In 1786, there were eighteen hundred mission Indians, about two-thirds of whom were Tlascaltecs. The Queretaro Franciscans gave up their missions to the Jalisco Friars in 1771-2, and at this time they had baptized in Coahuila and Texas about ten thousand natives. The rise, fall and ruin of the mission in these centuries is like the swell of the troubled ocean; the Spanish and French struggling for supremacy, the men for gain, the

Ruins of the Granary of the Second Mission, San José, Texas

Second Mission of San José, Texas

officers for glory, the adventurers chiefly for loot, and the Friars to save the souls of the unlettered savages, who too often took their scalps for their pains.

The most important part of a mission-establishing expedition was the priests or Friars who were to convert the savage natives and plant the cross in the unknown land. The Friars were architects, teachers and mechanics. It was their business to assume the practical part of the work. While converting the natives they employed them to build the missions in many instances, nearly all the old buildings being the result of the labor of native artisans under the instructions of the Friars. The ecclesiastics of an expedition under Domingo Ramon, for example, were six Franciscans from Queretaro and four Friars from Zacatecas. With the expedition were twenty-five or thirty horses, over a thousand goats, pack animals and oxen, so that while the number of fighting men was few they made a pretentious showing as they marched on, heading for the interior of what is now Texas. They had some difficulty in crossing the streams, losing at the San Marcos eighty-three horses in a deep pool. They crossed the Colorado, and in June, 1715, reached the River Trinity, and finding many Tejas, who received them kindly, they decided to make a stand. A treaty was consummated with the Indians and a settlement made in a land described eloquently by Ramon as one of fruit and flowers, charming to the eye and senses. The streams abounded in fish; buffalo and deer grazed on the prairies, and in the forest the wild turkey was found —all suggestive of a land of plenty.

The Indians were particularly tractable, and even welcomed the Friars, and it was decided to establish the first mission at the town of Nacodoches; here was built the mission of San Francisco. About sixty miles further on was a large settlement of Asinais, and in their midst was established the mission of Purisima Concepcion. A third mission was established sixty miles southeast of the latter, and called Guadalupe. In the erection of all these, the Friars used designs copied from other buildings in Mexico. The whites laid out the work, large numbers of natives being employed as laborers and unskilled mechanics. Nearly all the missions were made more or

Ruined Arches of San Antonio de Valero, San Antonio, Texas

Ruins of Mission of San Francisco de Espada, Texas, 1730

less attractive in appearance; some imposing, and all were constructed to last, being veritable fortresses, possibly with a view to contingencies which might arise with hostile natives. This ponderous method of architecture has resulted in the preservation of many of these old ruins until to-day—virtually the stepping stones between the past and present history of Texas, a period that in romance is hardly equalled and certainly not generally appreciated.

Ramon and St. Denis, through whose influence the expedition was sent out, were eminently successful, and the work of founding missions and converting the Indians went rapidly on. In July, 1716, a fourth mission was established at San José, about fifty miles west of Guadalupe, among the Nazones, peaceful Indians who had many rancherias in the vicinity. The missions were established in the most active Indian centers, or within reach of the greatest numbers, and by the end of the year the region between the Trinity and Red Rivers, said to be the garden spot of Texas, was sprinkled with settlements, each having its mission and its log cabins. Ramon built the presidio of Nuestra Señora de los Dolores de los Tejas a few miles south of the mission of San Francisco, and not many weeks later two other missions were founded—Dolores and San Miguel de Cuellar, the missions buildings being erected in the heart of the Aes and Adaes country.

For many months the Friars worked and labored, but, as with their predecessors, they found it almost impossible to civilize the natives and make them live according to the rules which governed the Spanish or French. Then came internal dissensions. St. Denis was arrested by Spanish officials, sent to Guatemala, but finally returned, and we find him again on the French side and commandant at the French fort at Natchitoches. The Spanish, still undismayed by the ill success of their Friars, continued their establishment of missions. In 1716 Martin de Alarcon was made governor of Coahuila and Texas, and in 1718 he built a large mission on the River St. Anthony, San Antonio of to-day, and established the presidio of San Antonio de Béjar. The mission was called San Antonio de Velero and Padre Antonio Alivares was given charge, removing his neophytes from the abandoned mission of San Francisco. Like his predecessors, Alarcon soon made enemies. He visited

Rear of Concepcion Mission

all the old missions and those of Louis de St. Denis, placing small forces at each to keep the natives in subjection; but his work did not satisfy the Friars, and he soon resigned. Then war between France and Spain was declared, and the French of Louisiana marched on Texas. In 1719 the French, with a force of natives allies, captured the mission of San Miguel, and the natives, taking advantage of the trouble, destroyed many of the missions, whose ruins can still be located—crumbling monuments of the times. The missions of San Antonio now became the center of interest, and virtually the Spanish capital, and in 1720 the Friars established a new mission at Béjar, calling it San José y San Miguel de Aguayo, the building illustrating the indomitable spirit which characterized these men.

Following another French invasion, an expedition under the Marquis de Aguayo re-equipped the deserted missions, five of which were destroyed, or partly so, all being rehabilitated. At this time all the missions except Concepcion had been destroyed. The old mission of San Miguel was also rebuilt by Aguayo, and a new era of prosperity began, only to be cut short by disaster to his people. Sudden cold

Purisima Concepcion de Acuña. Front of the Mission of San Antonio, Texas, 1731

weather killed 4,500 horses and 700 mules, but this determined officer was never discouraged. The life was strenuous beyond expression, yet he appears to have been equal to all demands upon him. He now built a strong adobe fort at San Antonio and founded a fine mission—San Francisco Javier de Najera. It was this officer who fortified the Bay of Espiritu Santo, erecting a new presidio there, and a new mission was founded with much ceremony, and called Espiritu Santo de Zuniga, later removed to San Antonio. It was at this mission that Captain Ramon was killed by the Indians, who abandoned it on the ground of ill-treatment, but the fathers established others fifty miles inland. It was about this time that Spain introduced many settlers from the Canary Islands into Texas at San Antonio, and the King gave $12,000 toward erecting a mission church.

Herewith are given illustrations of the San Antonio missions, now famous as the only ruins in Texas, which give an excellent idea of the architecture of the time. The second mission was perhaps the most artistic of all. The front was ornate, and originally bore much ornamentation. The arches of this venerable pile appear more like the sections of some great reservoir, or some of the buildings still seen about Rome, and were of the most ponderous nature. Even the granary of the second mission is a massive structure, resembling a fort more than a mere storehouse, and, doubtless, it was intended as a fortress where the Friars could make a stand if necessary against the Indians. The third mission of San Antonio is of a simple type—a long building, with three bells, built in a most primitive fashion. Singularly enough, the fourth mission is the least attractive, and presents the most appearance of a ruin. There were five missions on the San Antonio River within fifteen miles. Morfi refers to Purisima Concepcion as being "very beautiful," and San José, he states, "was the finest building in New Spain at that time." The latter was a fortified temple and had a large plaza 600 feet square, surrounded by tall walls, each face having a gateway over which was a bastion, while the walls were pierced with loopholes for the musketeers. Morfi describes this building as having three vaulted aisles topped with a fine cupola. The ornamentation was rich and beautiful; the house of the Friars commodious, and contained a fine polished stairway of stone, at the head of which was an image of St. Joseph. In the mission was a well-equipped armory, provided with weapons necessary to repel any invasion. The mission of San Juan Capistrano resembles Concepcion. Espiritu Santo was also a combination of fortress and mission, and was, with the home of the padres, community buildings, etc., surrounded by a high wall.

Of the Arizona missions most notable is that of San Xavier del Bac, named by Fray Eusebius Kino in 1700. San Xavier stands on the desert about nine miles from Tucson on the site of the old rancheria of the Sobairuri Indians. Kino visited the place in 1692, and in 1700, May 5, he founded the mission, giving it the name it now bears. This building fell to decay, but was replaced by the present edifice in 1783, its completion being celebrated in 1797. The original building was a small affair resembling in no sense the present imposing structure, which, while beautiful in itself, gains by its isolation and environment, which is a typical desert. At Tucson the traveler first meets the Papago Indians, who support the mission and who are earnest Catholics.

The old mission stands up against the mountains, and consists of not merely the church with its tower and dome, but a collection of buildings for various purposes, among which is an Indian school under the care of the Sisters of St. Joseph. Out on the plain is the Papago village with its huts, where are the descendants of the people who have lived here and owned the land for untold years. In its decoration the mission is extremely rich and ornate, its ornamentation being peculiarly Franciscan. Over the door is an artistic scroll and on either side images of the saints, about three feet in height, standing in niches, beneath a stucco scroll. Over the door is a portico from which a door leads to the interior, and over this a conventional shell of the tridacna class giving a fine effect. On either side of this portico are niches containing images of saints, the decoration above to that below being similar. Over this rises the mass of scrolling shown in the accompanying photograph. The observer regrets to notice evidences of decay and despoliation here and there. On the left of the roof rises a fine tower, pierced for the belfry, while another is incomplete. Back of this is the dome.

The Mission of San Xavier, Arizona

If the visitor is charmed with the exterior of this desert expression of Franciscan architecture, what can be said of

the interior, which exceeds in beauty any of the missions of the Pacific coast, possessing great arches, frescoed ceilings, and walls covered with pictures of the saints? Some of the work is, of course, barbaric, but the general effect appeals at once to the eye and doubtless has an effect upon the Papagoes, who are the principal worshipers.

The general shape of the mission is that of a cross. As the visitor passes from the dazzling sunshine of the Arizona desert into the building the contrast is remarkable, and doubtless awe-inspiring to the Papagoes. A mass of gilt, fresco and carving greets the eye altogether inconsistent with the squalid appearance of the Papago town and the desert beyond. Such a structure in the natural order of events should have a large subsidiary country to draw upon, but San Xavier stands alone, the little Indian town having the most interesting mission church in America. The arches of the church are extremely beautiful, the bases bearing statues of the twelve apostles. The principal altar—there are several—is dedicated to San Xavier, and bears many ornaments and small statues of saints, the Virgin, and representations of the Holy Family.

These quaint ruins are all that is left to tell the story of successive French and Spanish invasions of Texas and Arizona. They tell of the rise and fall of the Spaniards, but also suggest the failure to sustain the series of supreme efforts to conquer and civilize the natives of this vast region of which the Apaches were the most dreaded. In 1729 or 1730, the latter, to the number of 500, appeared at San Antonio and challenged the Spaniards to battle, but were ultimately defeated; yet they continued their depredations, and made life very uncertain. So aggressive were the natives in 1731 that the Friars moved the three missions—Francisco, Concepcion and San José—near to the presidio of Béja, and at this time San José was changed to San Juan Sapistrano. Many changes were made in the years to come, the Friars always losing influence, and in 1743 the Comanches destroyed the mission of San Sebastian Sabá and massacred the Friars, in retaliation of which the friends of the Friars gathered an army and marched against the Comanches, but they were put to flight. From now on the Spaniards and the missions became the objective of all marauding Indians, and in 1767 the viceroy ordered the abandonment of the missions. Up to this time the Crown had expended over six millions of dollars in Texas, and in 1782 the vast domain, owing to the continued attacks of savages, could boast of but 2,600 whites, mostly about the five missions in the vicinity of San Antonio. This large sum, hundreds of lives and the strenuous labors of scores of brilliant men through several centuries is represented to-day by these crumbling ruins in Texas. What they accomplished it would be difficult to state, but that they paved the way to a later civilization must be accepted. According to B. Morfi, San Antonio Béjar was a ruin in 1785. It cost $80,000. At San Antonio 1,972 natives were baptized down to 1762. At this time the mission owned 1,200 cattle, 300 horses, 1,200 sheep, but in 1793 its population, its converts and their descendants had dwindled to a pitiful 43. At Purisima, about six miles from the present San Antonio, 792 natives were baptized, and in 1762 it owned 300 horses, 2,200 sheep; yet in 1793 its population amounted to but 51 souls. San José baptized 1,054; San Juan 847; population in 1793, 34. San Francisco mission baptized 815; population in 1782, 80; and so on the dreary story of degeneracy might be told through all these missions, once rich with large flocks. They had become, so far as their importance was concerned, virtual ruins in the eighteenth century.

The Garden

The Garden Month by Month

AS soon as the shrubs have ceased flowering they should be pruned. This not only tends to keep them shapely, but it ensures a free blooming next season. The shape of a shrub is almost as important as its flowers, for the flowering period of most of these plants is comparatively short, though very beautiful; and throughout most of the summer and fall, unless their period of blooming is late, they present only branches and leaves. It is obvious, therefore, that the shrubs should be trained in graceful, agreeable shapes if they are to be continuous contributions to the beauty of the garden. Rambling branches of shrubs should always be cut off early in growth or the plants will assume unsymmetrical forms. Lilac blooming yearly will be promoted by cutting off the suckers and old flower heads. Hedges should be clipped to encourage lateral growth.

And weeds should be eradicated daily. Too much effort can not be spent in this direction. The garden lover who tends her own garden will often find this work indescribably tiresome, but the care spent in this direction will invariably yield good results. One quickly learns to distinguish the young weeds from the young plants of good flowers. It need hardly be added that every full-grown weed is not only a positive eyesore, but a real source of danger and harm to the flowers and shrubs.

Insect ravages must also be prevented with untiring care. There is no golden rule for the extinction of insect pests; those that are prevalent one season may not be pronounced another; only constant watching and unremitting application of preventive measures will produce results. The aphis, which attacks roses and asters, can be destroyed, and very easily, by applications of tobacco tea, made from tobacco stems, and showered on both sides of the leaves. Kerosene emulsion and solutions of paris green will destroy all insects, but these remedies are often too strong for the plants of the flower garden.

In dry seasons the soil should be loosened two or three times a week, and the ground should be soaked with water at least twice a week, and sometimes more frequently. The soil of ferneries should be kept constantly damp; as they stand in the shade they may be watered at any time of the day. Such spots should be watered by running the hose under the fern leaves and thus directly wetting the ground.

This is the season of the year when one begins to realize the results of earlier effort. Structurally the garden is in shape; the work of construction has been completed; the arduous daily labor with tools and machinery has been finished; the seeding has been done; the early cultivation has been proceeded with. The garden lover is about to taste the pleasure of results. Yet full grown as the flower garden is by the first of July, full maturity has not yet been reached. July and August are months of prolific flowering in the garden, the latter the richest month of all. One should not, therefore, look for final results as early as this. Nor should one cease to be unremitting in the care given to the garden.

The Household

Syndicated Service

FOR a number of years Dr. Robert Ellis Thompson, of Philadelphia, an educator and political economist of international reputation, and widely known as a writer and lecturer, has been preaching the gospel of the syndicated household, in which as much household work as possible will be done by corporations, and in which women will have nothing to do but to attend to the higher duties of the home.

It is an alluring picture he draws. There will be no Monday washdays, for convenient corporations will undertake this service for whole communities on the largest scale. There will be no sweeping, for hydraulic apparatus will perform this service both for the house and the streets alike. There will be no stairs to climb up or tumble down, for automatic elevators will be placed in every dwelling house. The cooking will be performed at central agencies, where the food for whole villages and towns will be prepared at smallest cost and with the slightest waste. Whatever labor is to be performed will be done by men, and of household work there will be none whatever for the women.

All of these things, on various scales, are already in operation. Dr. Thompson differs only from other prophets in looking forward to their general and universal application. The automatic elevator is to be found in many American houses, but its use in this country is as yet chiefly limited to costly private dwellings, in which stairs are still employed for ornamental and useful purposes. Laundering establishments have long been sources of profit to their owners, but the charges asked for the work they do have as yet been too great to permit the abolition of the home washtub. Our great hotels and office buildings are largely cleaned by mechanical means, and every inhabitant of a large city is familiar with the labors of the window cleaning companies. Various efforts have, from time to time, been made toward establishing central food supply agencies, but the individual home cook, notwithstanding her scarcity and her failings, still commands a high price and still enjoys a wide popularity.

But Dr. Thompson is confident that all the things he has in mind will come to pass, and come quickly. Expert workers dominate the manufacturing world, and so he thinks expert laborers in the household will become both essential and necessary. Already certain lines of such work have gone into the hands of expert laborers, and so he looks cheerfully forward to the time when we will have expert sweepers, expert dusters, expert window cleaners, expert bed makers, expert waitresses, expert child nurses, expert scrubbers, and experts in every line of household work. No doubt many a housekeeper will long for the day when these well-trained persons can be had.

The destructive prophet is a much less certain person than the constructive prophet. It is much safer to look abroad, note the tendency of effort in one direction, the movement of the same result in another, and draw conclusions as to the finality, than to argue simply that thus and so are impossible. When William the Conqueror built his great church in Caen he could not foresee the time when it would be lit by the electric light. Yet this has come to pass, and stranger things as well, and Dr. Thompson's dream of a syndicated household service may be realized sooner than he thinks. Meanwhile it may be observed that while eloquently arguing for this new state of affairs he himself lives in a charming house in a remote Philadelphia suburb, so situated that many, many years must elapse before he himself can call in the most efficient syndicate for the administration of his own household affairs.

Taste in Household Decoration

THE great requirement in household furnishings is taste. It is, of course, thoroughly delightful to have as much money to spend on a house as one wishes to, and to be indifferent, so far as the money goes, as to how much is spent; but it is much more important, as to results, to have only good things, disposed in a good way, charming wall papers, refined ornaments, exquisite combinations. These are the elements which go to make an artistic interior, not the mere amount of money paid for them.

The price of an article is no criterion of its merit, except that high priced articles should have greater art value than low priced goods. Art, real art, is costly, because much time and effort goes into its production. The genuine artist works slowly; if he belongs to the first rank he will produce but one or two masterpieces a year, perhaps not more than one in several years. He will use costly raw materials, because he knows his use of them will result in a fine production. He will apply to his task the knowledge and experience gained by many years of effort, possibly years of unremunerative effort. And the meanwhile he has lived and must live, and he expects to be recouped for his expenses. All these things make his prices large, although his profits may be very small.

On general grounds, therefore, good art is expensive. So also is bad art. Very high prices are often charged for very bad objects, and, which is very much worse, obtained for them. The result is much more disastrous than being simply a bad purchase, for many people are fascinated by high prices, and will pay large sums for false works of art which not only have no right place in a house, but which destroy the effect of whatever symmetry and harmony and beauty may have been obtained by artistic effort.

Nothing so completely destroys the effect of any room so much as the introduction of a gaudy, conspicuous, unartistic object which has no right place in any well designed and artistically arranged home. It is bad enough when such things are given to one; it is scarcely short of a crime to deliberately purchase them under the singular notion that something of genuine art value is being obtained. It is bad in every sense. It shows that the possessor has no real taste herself, and it encourages the production of fake art objects, which would quickly disappear from the shops were there no market for them.

Any one with good taste can accomplish very much more in household decoration than one who simply has money to spend. Such a person gives thought and care to the problems presented in the household scheme. She realizes the value of every individual object, and if she starts fresh, can produce effects in beauty that the most lavish expenditure will fail to produce. And it is good taste which accomplishes this result, not money.

Civic Betterment

The Political Aspect

THE movement for civic betterment, meaning by that phrase everything that tends to public improvement, that makes for greater public beauty, that increases public utilities, makes the public aspects of life better, more enjoyable, more useful, more beautiful, has a twofold effect, each dependent on the other and yet each helping the community in different ways. The movement has both a visible and a personal effect. The visible effect is, of course, in what one sees, in better roads, in more trees, in more beautiful gardens, in greater regard for the externals and for the public externals, as distinguished from what one might do for the immediate surroundings of one's own house and grounds. But there is also a personal effect which is quite different and quite as valuable. The civic betterment movement has taught many people the value of doing something for their community. It has taught them that they owe something to their neighbors and to the place in which they live, which is something very different from their personal private interests. It has demonstrated the value of co-operation. It has taught the lesson of common effort. It has shown, in many instances, that the private citizen can, through combination, exert an influence on the body politic, even when the chosen leaders and designated authorities are adverse to the proposals made to them. It shows, moreover, that the movement toward public betterment is a just one, and that the truth and the right will prevail against sordid greed or studied indifference.

This means a civic good of the highest value. It means an awakening of interest in public affairs. It makes clearer and clearer the fact that people have a voice, and a definite voice, in public affairs. This, of course, is no new thing, but the later developments of our political life have witnessed the very amazing spectacle of a people who "are and of right ought to be free and independent" calmly submitting themselves to a political domination by their chosen servants such as history has seldom shown, certainly never before, on such a scale and under such circumstances.

The civic betterment movement is not political, but everything that touches on the public life brings the agitators on the subject directly in touch with the civic authorities, which in these United States means the noble exponents of our political system. Again there is a double result: the non-political public finds that it commands an effect on the political body, and the non-politician comes in contact with the politician. Both parties make each other's acquaintance. There is direct benefit in this, even if the bad are found to be worse than they were imagined to be. It is something for the people to find out what sort of fellow citizens they have set over their heads.

This, however, is but an indirect result of the movement. Civic betterment is not political either in its purpose or its ends. But being, in many instances, concerned with public affairs, it brings its adherents immediately in touch with the political authorities. And so long as the movement is kept free from political entanglements this can only result in good. It is good for the people to become acquainted with their public servants, even if this fresh knowledge does not add to the value of one's information. If our political condition is bad, the further the people see behind the scenes the better it is; and if they are good, the results are still excellent, for no harm can come from a wider acquaintance with the good.

Ways to Help: The Individual

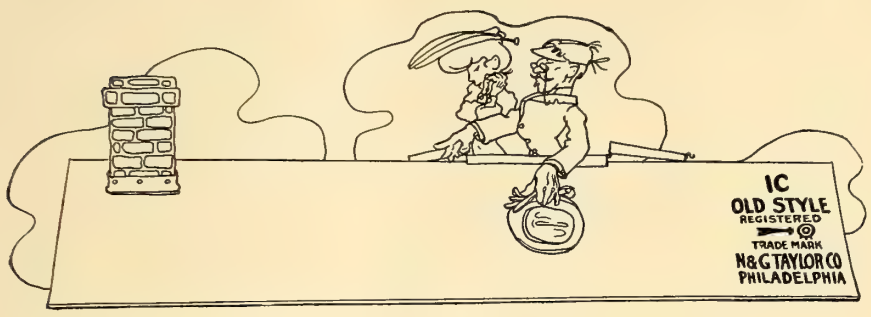
CIVIC betterment is a phase of public activity in which every one can help. One does not need to be a voter or of full age, for women and children can do as much as men, and, indeed, in many instances, the women are the most active workers and the most zealous leaders. Neither does one have to be elected to a public office, to be designated by an official body, or be a member of a society to contribute his quota to the uplift of his surroundings. The single worker can not do as much as two, nor two as much as three, nor three as much as a larger body; but the individual has his own part to do, and, in the absence of any general concerted effort, should not hesitate to do what he can, be it ever so small. It is the great merit of the movement that every little helps, helps, often enough, more than may seem apparent at the outset.

Civic betterment is concerned with the public aspects of communities. It has to do with the outside of things, with the outside of houses, with gardens, with streets, with roads, with public matters of the most varied sort, all subject to eye inspection. Its primary purpose, in homely language, is to make things better looking.

The individual may, therefore, begin with his own surroundings. The outside of his own house must be kept clean and neat. This is so essential as to be axiomatic; and yet many a small house, many an unimportant street, many an insignificant structure, suffers from inattention to this very obvious requirement. Cleanliness and tidiness are the first steps, and very good ones they are. But they are not the easiest nor the least irksome. One wearies of picking up scraps of paper, of getting rid of ashes in a tidy manner, of looking after the tin cans. And it is particularly painful to have one's newly swept yard littered with debris from less careful neighbors. But the public enthusiast must scorn at such annoyances; for in very many cases these indifferent neighbors will become converts to his own way of doing, and, in place of one clean yard, there will be many.

Beautification by plants and flowers, trees and shrubs, follows as a sure matter of course. A clean bare yard has no beauty—it is simply clean. It is something, it is true, but it is not much. Floral life is needed to give beauty and interest, and hence, quite naturally, much of the effort toward civic betterment has been directed toward floriculture. Very interesting results, results of the most surprising effect and penetrating charm, have followed this method. And the individual and the public alike have been gainers. The individual learns to know and to appreciate plants as he has not before; he takes a new interest in his garden; he broadens his view of the outdoor life. And the public value of these beauty-spots is, of course, very great. They give charm and distinction, they give life and interest, they redeem places perhaps otherwise uninteresting, and they decorate the community with brilliant bloom and graceful foliage—with nature's gayest dressing.

The work around one's house is but a part of the contribution the individual may make toward civic betterment, but it is a goodly part, worthy both of commendation and of emulation. It is something every one can do, and something every one ought to do. It may mean work, as all good effort does; but it brings results, and with these results comes a realizing sense of having done something for one's self that is of value to one's community. This is a civic result of the utmost value.



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The Care of Gas Stoves

IF the asbestos of stoves or fireplaces becomes discolored or blackened from the gas smoking, as it frequently does, says What to Eat, the thing to do is to sprinkle the feathery fiber with common table salt, then light the gas and let it burn the same as usual. The sooty appearance of the asbestos departs like magic and the mineral soon resumes its natural whiteness again. It happens, too, that the tiny apertures through which the gas flows become gummed and partially filled in; when such is the case, run a hat pin through the holes, or a round toothpick, and it will readily free them.

It is important also to give particular attention to the gas range if the best results are to be obtained, and this is especially true where it is in constant service for cooking. Things inclined to boil over quickly, like milk or coffee, should be watched to prevent it happening, as they clog the burners and corrode the iron and zinc linings, causing them to rust and get a stained, unsightly appearance. About once or twice a week, according to the use of the range, the burners should be lifted out, turned upside down, and lightly tapped to knock out any dust or soot that might have lodged in the circular aperture that supplies the flame. A hat pin is good for picking out any particles that resist tapping. When not using, keep the lids on the stove.

Keep clean by rubbing with a dry cloth, particularly the oven floor and racks. When anything flows over and burns, or grease pops around from baking meats, it should be thoroughly scoured with soap and warm water, then wiped with a dry rag. Keeping all gas stoves polished prevents them from rusting.

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of our cities are kept at a low temperature, is an extremely interesting theme for discussion, says an exchange. By enabling housekeepers to dispense with ice, these miniature cold storage closets form an excellent and economical substitute for the old-fashioned refrigerators, and the brine chilled refrigerators are better than those cooled with ice in being perfectly dry, as the cooling pipes, which are kept at a temperature of about twenty degrees Fahrenheit, condense upon their surface the moisture in the air around them and freeze it into a mass of frost crystals which cover the pipes to a depth of an inch or more. In St. Louis chilled brine for cooling purposes is supplied from mains laid in the streets, but in cities where cold storage warehouses are not so common as in St. Louis individual plants are likely to be required. A plant suitable for an apartment house containing twenty-five families costs about $5,000, but it is very probable that the extra rents that tenants would pay for sharing in its use would afford a large interest on the investment. The owners of some apartment houses in New York already supply their tenants with ice gratuitously as a special attraction; and it is probable that anything so simple as a cooling pipe service would soon come to be regarded by tenants as a luxury to which they were entitled without paying any extra rent for it. Under such circumstances it seems as if small individual cooling machines would be useful, not only to owners of apartment houses, but to housekeepers in general. It is said that a concern in Paris, France, makes a domestic ice machine, selling for about $15, which will freeze an ice cream or a carafe of water in a few minutes.

A Fireless Stove

FRESH attention has been given to fireless cooking by a report from the American Consul at Frankfort, Germany, on some recent applications of this device, which has been known for some time, and has actually been shown and used in this country. The German experiments seem to have been more extensive than the earlier efforts. The matter is one that naturally attracts a good deal of curiosity. The device is based on the fact that cooked food may be kept warm by being preserved under a cover. The boxes sold in Germany are heavy and lined with felt, or, better still, with hay, and the wife of the director of one of the industrial schools at Frankfort declares that she has used one for years, at first merely to keep food warm, but that since she has discovered that things may really be cooked in this hay box she has evolved a theory of cooking by it that has led to surprising and gratifying results. Articles which require to be eaten directly off the fire, such as griddle cakes or cutlets, to secure the desired crispness, are not satisfactory, but ordinary meats, vegetables, soups, etc, taste just as they should after a careful trial of the hay box. A few minutes' boiling on the gas range, and then several hours in the box, will prepare vegetables for eating, and they will keep warm there for half a day.

An economical woman will make her own "hay box" out of a discarded trunk or packing box that has a close cover and no cracks. This may be pretty well filled with shavings, hay, or even paper, in which the pots (preferably earthenware) of food are closely packed and covered with a pillow to avoid the escape of any heat. Care must be taken to air the hay and interior of the box when not in use, as it grows musty, and fresh hay should be put in every few weeks.

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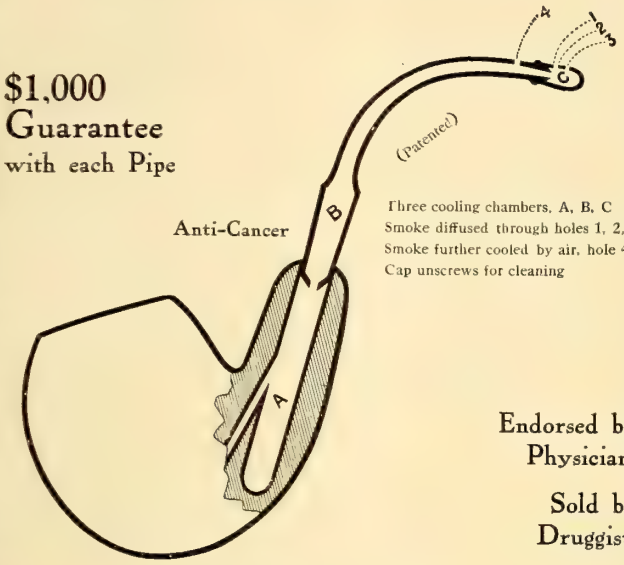

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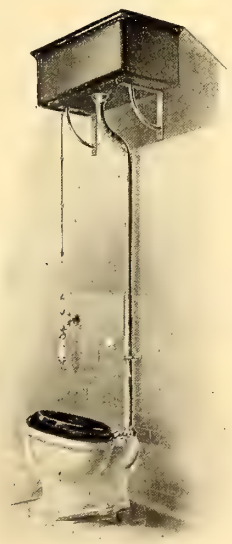

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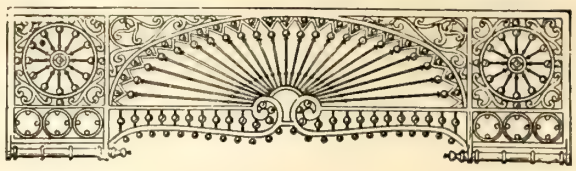

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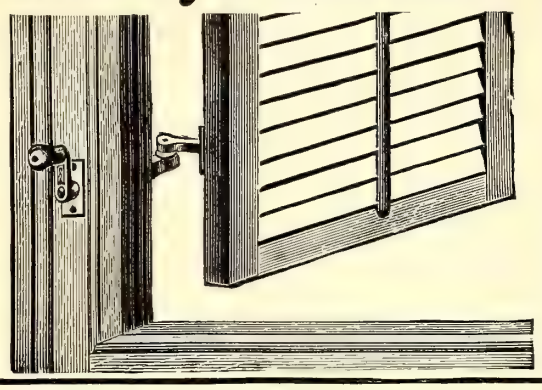

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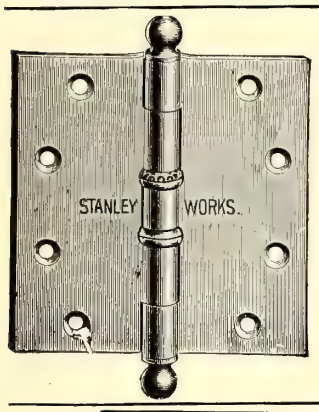

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SANITARY IMPROVEMENTS OF THE HOME

By George Ethelbert Walsh

THE sanitary development of the modern home shows many interesting features and new ideas which tend to conserve and protect the health of the occupants. It is a mark of our civilization that more attention is paid to the permanency and healthfulness of our home structures than ever before in the history of the human race, and all that science and art can contribute toward the subject is eagerly sought and applied. Architects, engineers and builders are co-operating to evolve new types of houses which will prove far more durable than any in the past, and, without sacrificing any of the comfortable and artistic features of the homes of to-day, they will be practically fireproof, dustproof, verminproof, soundproof, dampproof and perfectly sanitary in every respect.

The modern devices intended to supply these ideal conditions are somewhat numerous, and their adoption is becoming quite general in the new types of houses. The fireproof house, is, to all intents and purposes, proof against sound, vermin, fire and wind. With walls, floors and ceilings constructed of hollow fireproof clay, a house of this character is made far more durable than any built of wood or brick. The walls and floors are interlocked by patent steel devices which make them as firm and stable as though built on structural steel framework. It is only within the past year or two that contractors could build country homes of fireproof clay tiles without the supporting aid of steel structures. With the invention of interlocking corner devices, the steel skeleton work was dispensed with, and almost immediately the price of the new fireproof houses dropped so that the most modest country home could be built in this way.

Such homes are fireproof, durable and cleaner than any other class. The hollow walls are dust and verminproof, while sound, wind, heat and cold are kept out in a most satisfactory way. They are warmer in winter and colder in summer than wooden or stone and brick houses. A great variety of colored tiling and fireproof terra cotta material is manufactured, so that excellent blending of colors and architectural effects can be made. The colors of the tiling and terra cotta are woven into the building material, and they are retained just as long as the house itself stands. Unaffected by salt air, storms or wind, the colors maintain their original beauty indefinitely.

But for houses already constructed almost similar ideal sanitary conditions can be obtained at comparatively little extra cost. Interlocking fireproof partitions can be built in houses in place of the old plaster and lath partitions, with the result that sound, wind, heat or cold can not easily pass between. Vermin find no lodgment in such hollow partitions. The fireproof blocks are tongued and grooved so that they lock permanently, and plaster can cover the interior surface if desired. Another method is to use mineral wool for packing between the old walls and floors. The mineral wool sheets when applied make the floors and walls fireproof, soundproof and verminproof. The alterations required are simple and inexpensive, and the results are such that permanent comfort and additional sanitary conditions are obtained. Metal ceilings are other devices for producing similar desirable results. Stamped in nearly every imaginable design to suit the decorations of the most artistic interior, they furnish durable fireproof floors and ceilings that eliminate the troubles caused by cracking and fall-

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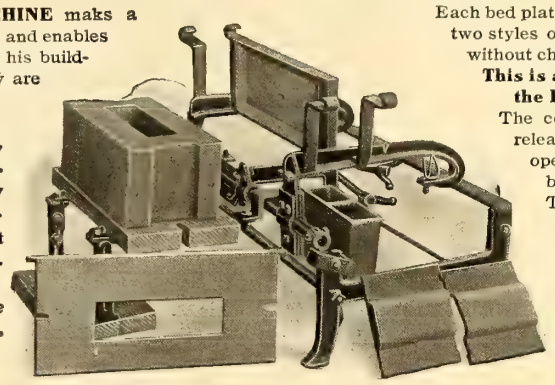

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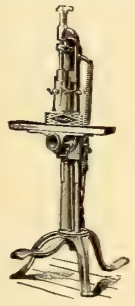

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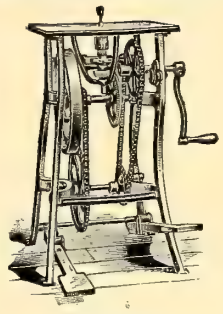

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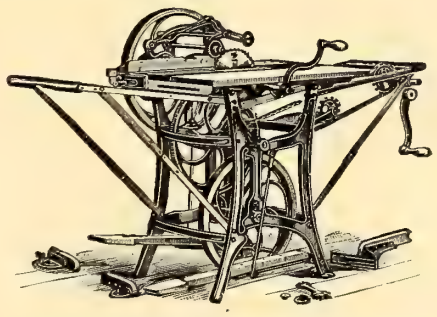

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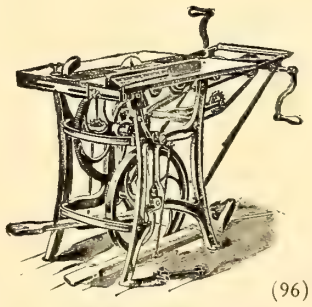

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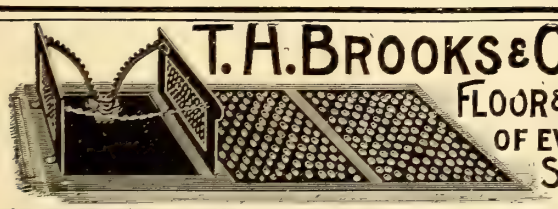

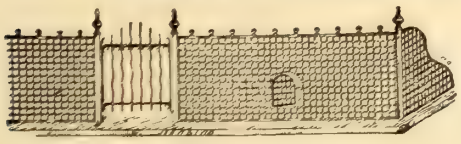

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which cleans and polishes floors, uses sandpaper instead of knives, removing all dust, dirt and inequalities in less time and with less effort than ten to twenty men could do the same work, leaving an absolutely level smooth surface. For private dwelling houses, hotels, dance halls, armories, theaters, churches, schools and all large or small buildings, for floors, old or new, hard or soft, this machine will be found invaluable. The process is sanitary, saves carpets and linoleum, and prevents the gathering of germs. Can be easily operated by any mechanic. **No Inconvenience to Occupants During Process of Cleaning.** This Wonderful Machine is Not an Experiment but an Acknowledged Success Everywhere. It is extremely simple and a great economy. The machine is operated by electric power obtained from the power companies or generated by a small engine and generator in a wagon outside the building :: :: :: ::

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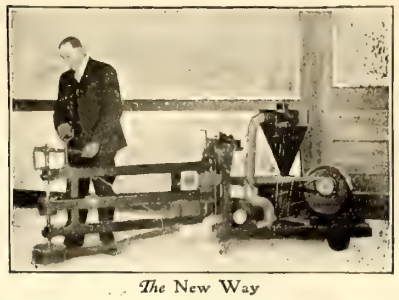

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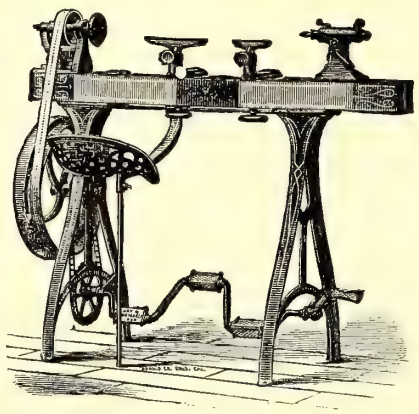

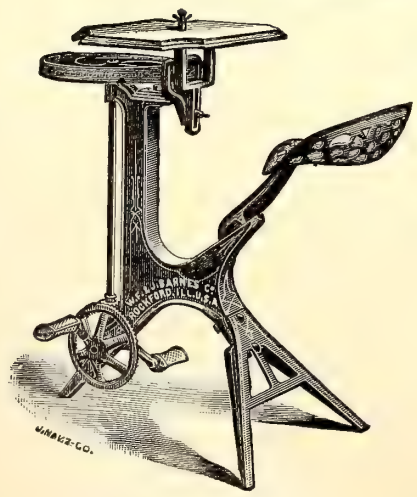

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plaster. No vermin or disease germs can find lodgment in these metal or fireproof clay walls or ceilings. The metal ceilings and walls are made in plates, panels and sections, with joints and tongues so closely grooved that they are practically dustproof.

The question of dampness of the home has received a vast amount of study and experimental work in the past. To be dry is to insure health and comfort in the home; to have the living-quarters damp is to invite sickness and death. Dampproof houses are now constructed even on marshy, wet ground, and where formerly pneumonia, rheumatism, fever and neuralgia ravaged the inmates of dwellings, perfect health is now obtained through the remodeling of the structures. The dampness enters the house by the stone walls and foundations in a great many instances, and to prevent this there must be a dampproof course of sheet lead, asphalt, sheet bitumen or cement and cinders. This course is placed from three to six inches above the ground line, and is made a part of the foundation. Where the house stands on very wet soil, the horizontal dampproof course is not alone sufficient, and usually double walls are built for the foundation, with an open air-space between.

In addition to such preventive measures the walls of the cellar, foundations, inside and outside, and the flooring are painted with dampproof paints or other preparations. Most of these paints or metallic liquids are impervious to moisture, and when the house is protected by them it is impossible for the dampness to enter the structure by the walls or foundation. Where these patent silicates or paints are not used, two coats of Portland cement wash will answer nearly the same purpose. In houses already constructed such improvements can be made, so that the dampness of the house is eliminated. The use of dampproof courses in the walls, and dampproof paints and silicate solutions inside, practically makes the modern country house situated in a low valley almost as dry and healthful as another located on a high, dry, well-drained hillside.

Almost equally important as the dampness of the house, and closely associated with it in securing perfect sanitary conditions, is the subject of interior ventilation. A great amount of ingenious study has been given to the ventilation of public and private buildings, and to-day with patent ventilators and air-filters we possess an immunity from foul, dust-laden air that should add greatly to our days of health and happiness. There are scores of systems of ventilation of houses, but ventilators that admit the fresh air and carry out the foul air are now reaching a stage of perfection that may make us independent of windows except for light. Not only this, but dust-collecting and sifting devices are being installed with these ventilators. In the country the importance of dust-collectors or sifters is not so great as in the city, where smoke, dust, soot and dirt are carried from the streets into our homes in great quantities. Where exhaust ventilators are installed, with dust sieves connected with the inlets, several quarts of dust are daily collected in some homes. This dust and dirt, if not actually breathed by the inmates of the home, would spread around in carpets and furnishings, and, carrying germs with it, would furnish cultural grounds in the dark corners of the rooms. Dust collectors must, therefore, be a feature of the future sanitary home as much as the ventilators and sanitary garbage holders and incinerators. In cities where soft coal is used freely for burning, the amount of soot and dust collected in the sieves at the inlets of the ventilators is sufficient to ruin curtains and carpets within a short time. From an economical and sanitary point of view, the installation of devices to filter the

air for our homes is of the utmost importance.

The disposition of the garbage of tenements, hotels and high-class apartment houses of cities has been satisfactorily solved in the past few years by the installation of garbage incinerators in the basement, with each apartment or room connected with it by dustproof chutes. The dust, garbage and sweepings are dumped into the metal chutes, which are automatically sealed at each entrance, and the material passes quickly and noiselessly to the incinerators in the basement. The garbage is thus immediately burned, and the heat generated from its destruction used either for heating the apartments or for supplying power.

The question of garbage incinerators for private houses has been slower of solution, but hot-water heaters and crematories are supplied to-day so that the garbage is no longer a nuisance or danger to the household. The incinerators are connected with the kitchen by iron chutes which automatically open and close to receive the garbage and sweepings. The refuse falls directly into the fire, which heats the coils of pipes that may be used for heating water for kitchen and bath purposes, or for keeping the house warm in winter. The incinerators are dustproof, and no harm follows if the garbage is not immediately burned every day in hot weather. The destruction of all the refuse from the house and kitchen by fire removes a vexing and troublesome question from the housewife's mind. The simple installation of such incinerators does away with garbage collectors and outdoor garbage bins and barrels. The removal of the ashes from the furnace is the only dirty work left for those who must attend to their own heating apparatus.

Perfect modern plumbing removes the last danger from our homes, and, when scientifically constructed, sewer pipes, water pipes and drainage mains are no more inimical to our health than if they carried only cheap, fresh spring water into our residences. The tendency to cheapen plumbing work is a fruitful cause of most of the troubles arising from this source. A good plumbing service is worth more to the householder than fancy interior decorations. Moreover, a perfect system is durable, while a cheap one adds frightfully to the cost by numerous repair bills. A dozen important devices have been invented within the past year or two for improving sewer and plumbing systems, and these all tend to eliminate danger, prolong the life of the pipes and drains, and to make repairs simple and inexpensive. Deeper and more perfect traps are used to avoid the possibility of danger from evaporation; all traps and mains have fresh-air inlets, and cleanouts which can easily be reached by any one provided with a wrench and hammer. Stopcocks and valves are numerous, and every joint underground is laid on a concrete or stone bed to prevent sagging and rupturing of joints.

The sanitary condition of our homes would not be perfect without consideration being given to the floors and interior decoration of walls and ceilings. The harboring of disease germs and vermin in cracked walls and floors is a trouble that is often removed with difficulty. Even with walls of fireproof clay tiles, which offer no lodgment for vermin, a covering of wall paper, and a wainscot and trim of wood might easily nullify the good obtained with the employment of the former. A floor or wall that is perfectly smooth, and absolutely free of all cracks or holes, can not harbor germs and vermin. They require hiding-places where they can hatch and breed. Otherwise their destruction by ordinary careful housecleaning methods is sure and swift.

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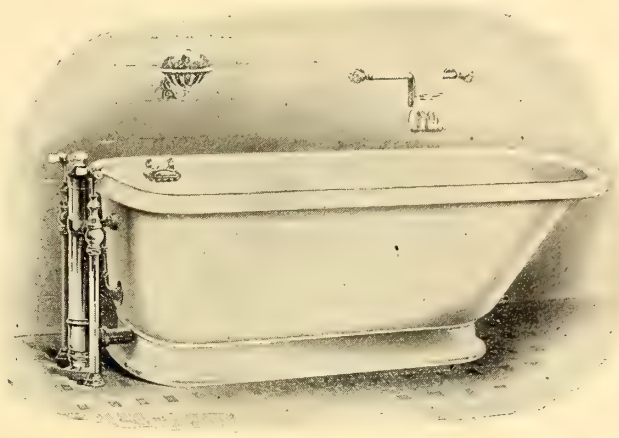

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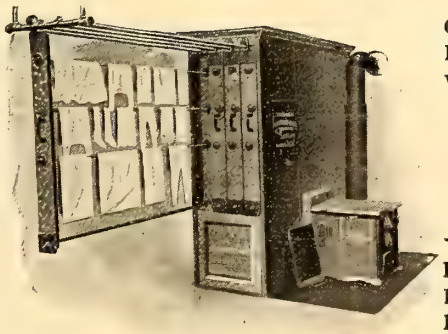

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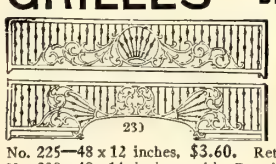

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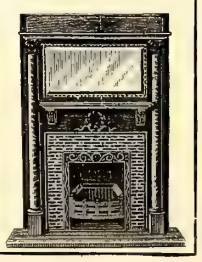

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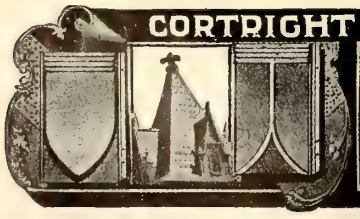

are commended to the attention of Architects who are seeking to combine beauty and economy in their work.

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perfectly dustproof floorings and ceiling decorations. A number of inventions have been made which appear to answer the purposes. Liquids that harden and form smooth floor surfaces have been invented, so that at the corners a perfect joint is made. Interlocking rubber and marble tiling is used for bathrooms and kitchens. Interior metal sheathing is employed also, and the surface painted so that there is not a crevice left anywhere large enough for a flea to hide in. Even tapestries and burlaps treated with fireproof and verminproof materials are manufactured for wall ornamentation, and when properly applied there is no space left for dust or vermin to find lodgment. Wood pulp has been tried for producing finished floor surfaces, and when applied in the liquid state and allowed to harden the protection is nearly perfect.

All of these surface preparations for the interior are proof against damage from water, and frequent washing is permissible. It is even considered probable that the future kitchen will be washed with hot water daily by means of a hose and spray so that every particle of dust and dirt can be removed. By applying a spray of hot water under considerable pressure to the walls and floors, germs and vermin of all kind brought in during the day would be removed and swept away by the water into the sewer.

It will be seen from the foregoing that science is rapidly minimizing the danger of home life due to the introduction of germs, filth and dirt that must inevitably enter our houses from the streets. By applying safeguards that have proved their worth, we insure to ourselves and families immunity from many diseases which to-day are purely of local origin. We are building homes of more permanent and durable character than ever before, but we must also secure for them all the sanitary safeguards that science and experience teach us are necessary for our health.

FIFTY SUGGESTIONS FOR THE HOUSE

1. Floor Coverings

THE floors of bathrooms, sculleries, water-closets, larder, lavatories, greenhouses and sometimes of halls should be covered, whether with hydraulic pressed tiles, marble, mosaic or some substance of a non-absorptive character, so that they may be washed down frequently. In the case of lavatoires, bathrooms and sculleries the floors are best laid sloping, so that when washed down the dirty water may be led, by means of a duct pipe, into a rain-water head to discharge over a gully trap. Ordinary basement floors are best finished with solid wood blocks laid either straight or herring-bone on a six inch bed of Portland cement concrete, and in some form of bituminous composition. For ordinary rooms the best floor covering is either hard wood, such as oak laid in half-batten widths and beeswaxed and polished, or good selected deal, stained and well varnished. The edges of the boards should be grooved and tongued. Parquet flooring may be laid over the whole surface in order to ensure an uniform and impervious surface without cracks in which dust may accumulate. It may be cleaned with a mixture of turpentine and beeswax.—B. F. and H. P. Fletcher.

2. Bedroom Doors

DOUBLE doors to communications between bedrooms en suite are especially important, particularly in the case of bathrooms. The locks should not be opposite each other where

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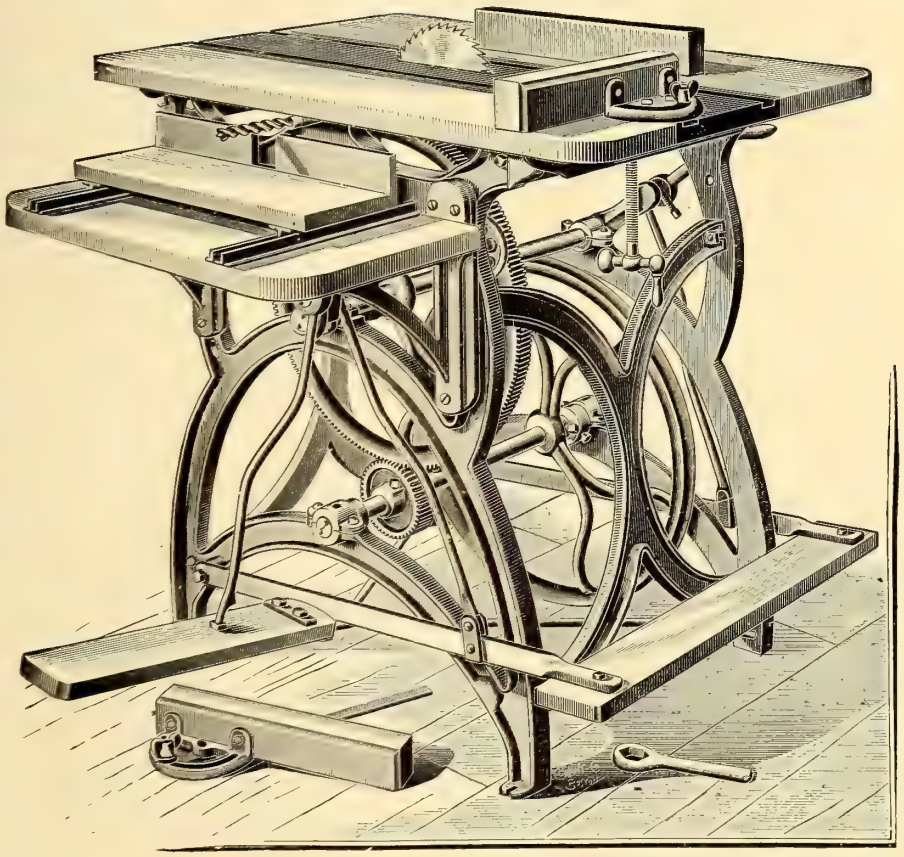

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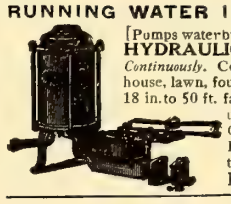

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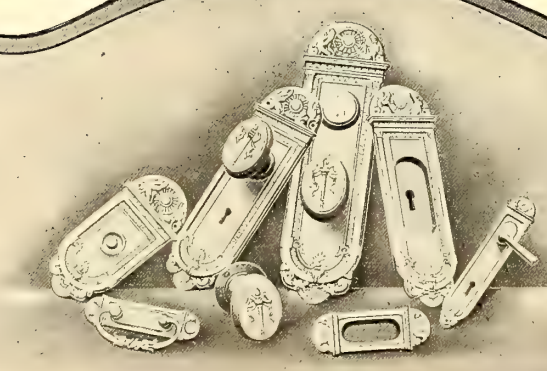

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THE NEW CARPENTERS' AND BUILDERS' STANDARD LIBRARY. By Fred T. Hodgson. 8 vols. Brotherhood Edition De Luxe. Pp. 2,200. Chicago: Frederick J. Drake & Co.

The value of books in the art of education is now so completely recognized that many handbooks have recently been produced in departments of art and knowledge where, but a few years since, they were quite unknown. The Carpenters' and Builders' Standard Library is a case in point. It is not brought forward as an attempt to supplant, in any way, the value of personal practical activity at the bench or in the shop; but it undertakes to summarize the whole subject of carpentry and building knowledge in a way undertaken by no other publication, and includes within its scope thorough treatises on phases of these arts which are nowhere else so fully summarized, and which few men could obtain by many years of practical experience.

Mr. Hodgson has long been known as a successful writer on the subjects treated in these volumes. His directions are concise and definite; his suggestions are helpful and timely; the field he occupies is almost wholly his own, and he combines the knowledge of the practical man with the skill of a writer in a very unusual degree. Most of these volumes have appeared separately and under various auspices, but they are now all brought together in a convenient uniform edition, attractively bound and printed, and forming not only a valuable addition to the practical workingman's library, but one which no one engaged in the art of building can do without.

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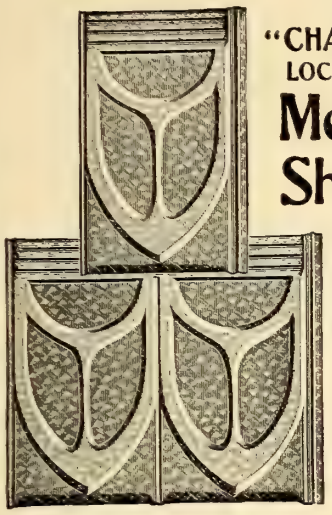

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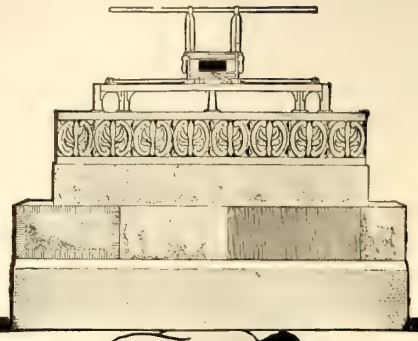

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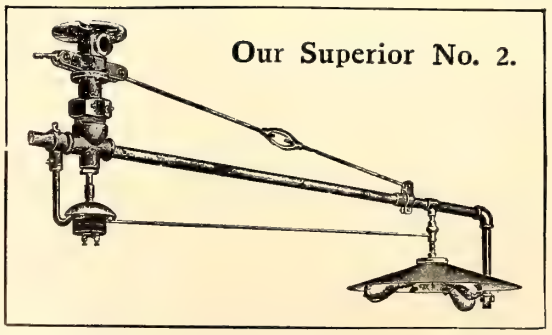

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Science in the Home

THE HOME SCIENCE COOK BOOK. By Mary J. Lincoln and Anna Barrows. Pp. 281. Price, $1.00 *net*. Postage, 11 cents. Boston: Whitcomb & Barrows, 1904.

The authors of this book have acquired a national reputation by their writings on cookery, and their earlier books have many times formed admirable domestic guides to the housekeeper, seeking for tasty recipes, plainly stated and collated with due regard to the needs of the average home. The present volume has been prepared for the special needs of small families, and it is bound to have, therefore, a wide welcome from those seeking household recipes calling for small quantities.

Although the household recipes form the basis of this handbook, and furnish, indeed, the reason for its existence, the book contains much valuable and helpful advice on household affairs, which the beginner in housekeeping will find most suggestive and from which even the older householder can glean points of wisdom and assistance. The book is entirely devoid of fads, and is a plain, helpful household guide of very great utility.

The Vegetable Garden

HOW TO MAKE A VEGETABLE GARDEN. By Edith Loring Fullerton. Pp. 20: 347. Price, $2.00 *net*. New York: Doubleday, Page & Co., 1905.

The publishers of this book are quite justified in designating it as "invaluable," notwithstanding the fact that it is manifestly addressed to the amateur, and is intended to stimulate the interest of the amateur in vegetable gardening. The author has endeavored to produce a book that is at once readable and thoroughly practical and serviceable, and has succeeded in this difficult task in an eminent degree. And it is to her credit that her rhetorical phrases do not lessen the pointedness of the suggestions and information she presents.

The book covers the whole subject of the vegetable garden, and it covers it in a very thorough and excellent way. The beginner will here find the facts needed for the successful beginning of a vegetable garden concisely stated and plainly explained by one who gives evidence on every page of her thorough equipment as a guide. In a sense the book is especially directed toward women, in the hope of increasing their interest in this part of the home surroundings; but no vegetable grower can fail to find help from its pages. Dealing as it does with the requirements of the small garden as distinguished from the needs of a farm conducted on a large scale, the book has merit and usefulness of very real value.

The text is aided by more than two hundred illustrations, including both vegetables and photographs of garden labors, together with many diagrams. It is a book which will not only meet an immediate need, but which must greatly extend interest in vegetable gardening among the owners of small places.

PUBLISHERS' DEPARTMENT

The Prize Kitchen

It is undeniable and regretworthy that the kitchen has received less attention from magazines and journals than any other room in a house. This indifference is hardly to be explained in the face of the large numerical fact that recent government statistics show about eighty-three per cent. of the women of the United States do their own work. Seventeen per cent. keep servants, and of this smaller body only two per cent. employ two or more. If seven hours a day is a fair estimate of the time spent in the kitchen, the housewife and mother of the family is entitled to have such an exacting period made even more comfortable, sanitary and practical than in France, England and Germany, where, although not quite perfect, it is far better arranged and attended to than here. The sacrifices made in the name of the kitchen are legion, in spite of the claims that are beginning to rise, that it should be one of the chief accessories to household good management. Having now arrived at the mature state of unsuccessfulness with our kitchen, it is evidently time to encourage every movement toward improvement. One sign that the measuring stick is out to some purpose is the announcement of splendid prizes in money to be awarded for plans and ideas for a model kitchen. The result that will obtain from the competition may drive away the selfish haze about the domestic appreciation of this corner of the ground floor, so often constructed on limited lines and means, that it is lightly dubbed the " off-room " in the household integer. The true regulatory force of a system should work for the practicalities as well as the luxuries of a home, and should let no room stand out alone in its " monarchical influence," as is often the case with the drawing-room or the library, and we apprehend that the neglect of the humble quarter for such as these will be stopped when architects, authorities on domestic sciences, housekeepers, home builders, editors of architectural periodicals and magazines, household papers, and domestic trade papers, waken to the developments that are bound to come from the prize scheme for " Ideally Complete Kitchens." The originator of the prize offers is the firm of G. P. McDougall & Sons, Indianapolis, Ind. It manufactures only one piece of kitchen furniture, nor does it intend to make any others, but does expect to publish in attractive form various ideas sent in that will be helpful to the further advancements of the American kitchen, with the view of making it an ideal room. This will come through better ventilation, light, harmonizing, appropriate and labor saving furniture, utensils, color treatment of walls, ceilings and floors, increased superficies, the betterment of rear doors with or without enclosed porch and their relations to the back yard. Our idea is that an equally rare kind of expertness and taste is required in their way to make one room as efficient and acceptable as another; that it is as necessary to give the best thought in planning and placing a sturdy array of apparatus and accessories for the cuisine as to exercise the most delicate art for the exposition and use of parlor refinements, and the McDougall idea calls for such an exertion of faculties that the best will receive in their order of merit $1,800 in prizes, subject to the requirements of competition and points for consideration, distinctly and succiently stated, as follows:

" Model plans wanted for an attractive and practical kitchen. It must be a kitchen for an ordinary residence or flat, not for a palatial mansion. It must contain the best possible model of a kitchen cabinet, embodying the full working surface of a kitchen table and utiliz-

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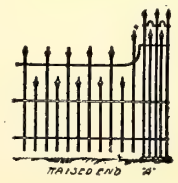

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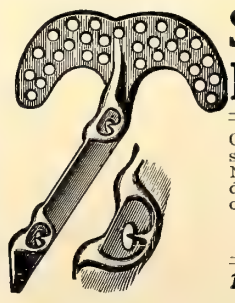

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"Each competitor must submit: (1) Carefully drawn floor plan showing location of doors to rear, to pantry, to dining-room, placing of windows, arrangement of range, sink, ice-box, kitchen cabinet, etc. If any necessary convenience is placed outside the kitchen, its position must be indicated on the plan. (2) Carefully drawn elevations of four sides of kitchen. (3) Carefully drawn perspective and elevation of side containing the cabinet. The shape and proportions of the cabinet should accord with his kitchen scheme. All necessary sections should be indicated. (4) A clear description of the kitchen and cabinet not exceeding seven hundred words.

"Kitchens and kitchen furnishings are usually ugly. In the revival of domestic art this part of the house has as yet been overlooked. The chief aim in offering these prizes is, first, to draw out the best thought of the best designers on kitchen conveniences; and, second, to give the whole country the benefit of their thought. The prizes have been made exceptionally generous in order to induce the busiest and most skilful architects to take part in this competition. In the model kitchen the useful need not exclude the agreeable. Ventilation must be borne in mind; the building in of the range; the placing of windows both for light and for decorative effect; the treatment of woodwork; the use of such material for floor, walls or table tops as has some special recommendation for sanitation, cleanliness, durability or other practical purpose. Suggestions for furniture and for color scheme are in order. ABOVE ALL there should be borne in mind the possibility of IMPROVEMENT IN THE KITCHEN CABINET, that indispensable adjunct of the average kitchen. The ideal cabinet should present all the housewife's requirements within easy reach of her hand, and should have a full working table surface. To save space, to save steps, to save trouble is its threefold object. It should not be cramped or crowded; all its parts should work freely; its proportions and lines should be artistic. To assist competitors a booklet showing the best kitchen cabinets now being put out by the factory will be mailed when requested. Please read. The McDOUGALL IDEA is to lighten the labor of the housewife, to make life easier for her, to save her innumerable steps and unnecessary work. Competition is open to all architects, draftsmen, furniture designers, etc., residing in the United States, Canada or Europe. The competition will remain open until Aug. 1, 1905."

These prize offers will bring ideas, plans and suggestions to McDougall & Son from many parts of the world, and we feel hopeful that some of the best points not procurable from any other source will be given our readers in due time. We understand that already sketches have been received from architects and others, done in colors, ink and pencil.

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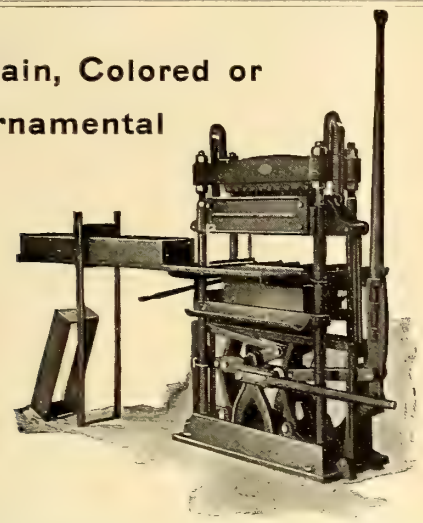

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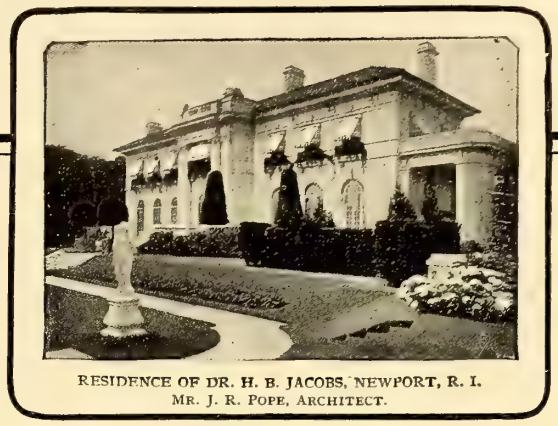

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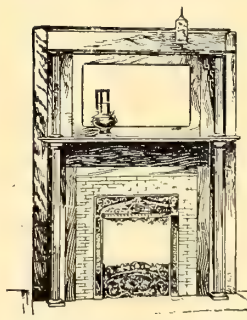

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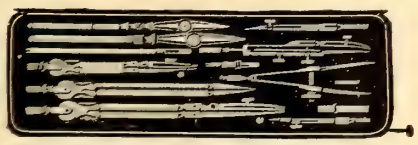

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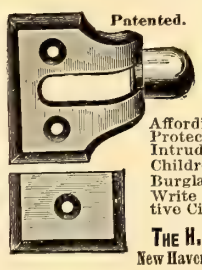

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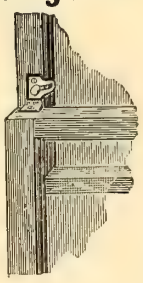

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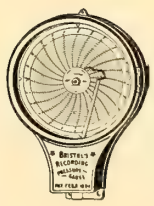

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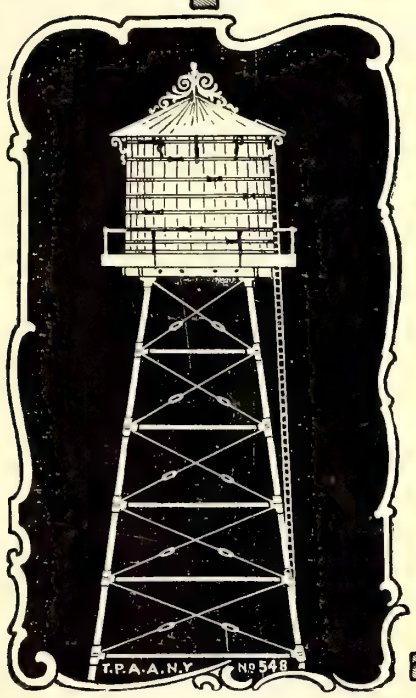

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We have received from the Gorton & Lidgerwood Company, 96 Liberty Street, New York, N. Y., its booklet "Modern House Heating," just issued, and note a number of important improvements recently made in its well-known line of side-feed steam and hot water boilers. From its inception, about twenty-one years ago, this company has manufactured only high grade heating apparatus, and the wide demand for the product has been the natural result of more than ordinary merit and enterprise. Conceived on the most approved lines for economy and efficiency, the development of the Gorton boiler has been marked by a continual improvement both in design and construction, until in the attractive and complete line shown in the new booklet there would seem nothing left to be desired where the very best in the way of steam or hot water heating boiler is required. Probably the most notable departure is found in the increase in the number of sizes in which the Gorton boiler is manufactured, the company now making no less than thirty-three different boilers for hard and fifteen for soft coal use. Heretofore the largest size of steam boiler made carried 3,400 square feet of direct steam radiation, while the largest size of the new steam boiler will carry 4,500 feet. Another improvement of considerable importance is the reduction in the height of the large size boilers so that all can be used in the cellars that are available under old buildings. Where the largest size boiler already referred to formerly stood 92 inches high, the new style will stand but 81 inches.

THE IMPROVED GORTON SIDE-FEED BOILER.

Further improvements are found in the base, which is now so arranged that the grate and grate bars can be easily cleaned and removed when necessary and still retain the free air entrance feature, which has been a substantial aid in promoting a complete combustion of the fuel and effecting a high efficiency of the surface. The improved construction also retains the well-known side-feed advantages, which are distinct features of the Gorton boiler and by means of which the boiler will maintain a steady even fire, and furnish constant heat day and night in the coldest weather. The boiler shell has also been increased in diameter and provided with a large number of tubes. The fire travel is the same as heretofore, and the products of combustion rising in contact with the surface of the tubes to the top of the boiler, where baffle plates necessitate a downward turn, secure a long fire travel before the smoke outlet is reached. The Gor-

ton boilers, the improved type of which is shown in the accompanying engraving, are made of steel, with the best charcoal wrought iron tubes; the shell being one-quarter inch thick, and the heads five-sixteenths inch thick of the best flange steel, of 50,000 pounds tensile strength, thus insuring safety and durability.

That a persistent improvement marks the work of this firm is shown by the evolution of types in its nearly fifty boilers for use with different kinds of coal. Such a record certifies the brand, and indicates its aim is to so construct as to corroborate the judgment of both maker and user of steam and hot water heating apparatus. All of the several parts of the new line of Gorton boilers are clearly illustrated in the booklet, which also gives prices, ratings and other information of interest to steamfitters and heating contractors. Copies, we understand, will be gladly furnished for the asking.

Toilet Powder

PERHAPS, on the whole and in the long run, there is no article for close personal use in the choice of which so much judgment should be exercised as in that of toilet powder. When the selection bears the hygienic recommendation of physicians and the practical sanction of nurses, the user feels that the luxury grows into a necessity. In these days of imitation and substitution, when there are so many inferior preparations on the market, the protection and aid just mentioned should be sufficient to keep purchasers on guard to get the best. Highly-scented toilet powders are so numerous as to be a continual source of danger. Such inferior products will often do permanent injury to a delicate skin. It is wise never to take chances with an unknown article. Be sure, rather, to insist upon a trade-marked product of recognized merit. With toilet powder, as with most other lines of goods, it is safer to trust an old-established house, with years of experience and a reputation for making only the purest and most efficacious. Mennen's Toilet Powder is a trade-marked article, and is generally received as a composition impossible to improve upon. The absolute purity of its ingredients and their painstaking handling have given the product of the Mennen Company a uniform and unsurpassed quality of excellence. The trade-mark is Mennen's face, and it is on every box-cover of the genuine. It is understood that more than 11,000,000 boxes were sold in 1904, the extent of its adoption ranging from the household to U. S. Government use for both army and navy.

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THE old house of the Thatcher Furnace Company has changed its address from No. 240 Water Street to Nos. 110-116 Beekman Street, New York, N. Y. Fifty-five years is not a trifling space of time in the life of an industry, and when an item of interest occurs in such a record we take especial pleasure in mentioning it. Without inaugurating any material change in its well established business, the move spells that better times need better conveniences in space and location. This firm is perfectly equipped to build up and sustain its model system of heating. With a strong expert at its head in the works at Newark, N. J., the battle of the caliber of furnaces, ranges and boilers has never gone against the simple and efficient construction of these apparatus, now to be seen at the new premises. Prominent in this exposition stands the "Thatcher" steam heater represented by the accompanying illustration. It has two bridge wall sections, and is furnished with steam gage, fire tools, cleansing brushes, water col-

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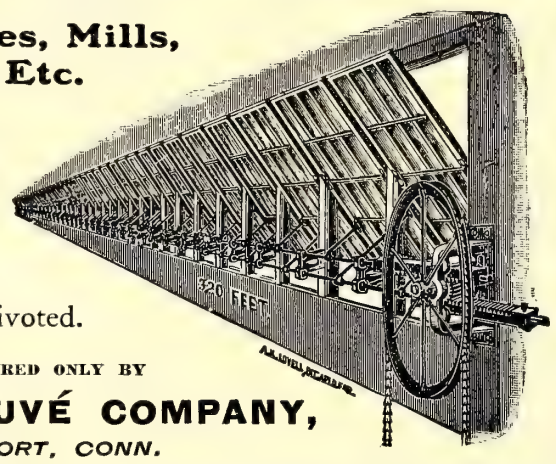

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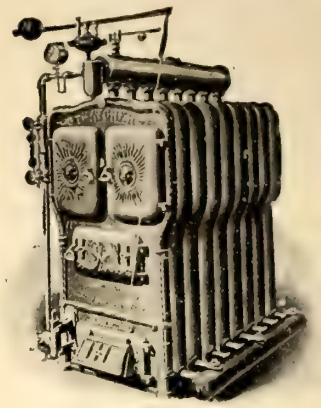
umn, two gage cocks, glass water gage and one draw-off cock. It has 4,050 square feet of direct radiation. Other steam heaters are named the "Comfort," "Empire" and "Ross-



SECTIONAL STEAM HEATER.

more." The hot water heaters are called the "Thatcher," "Comfort," "Empire" and "Stirling." The "Thatcher" sectional hot water heater is similar in construction to the "Thatcher" steam boiler. Its numerous waterways provide ample space for the water to ascend freely and rapidly, creating a positive and uniform circulation through every part of the heater, under all pressures, with the greatest possible economy in fuel, and also prevents the accumulation of sediment, reducing the friction to a minimum. The capacities of these heaters can be increased at any time by adding additional sections when more heating power is required. This is an important advantage when additions are made to buildings and to the heating plant, and often does away with the necessity of purchasing an entirely new apparatus. In construction the firm has carefully adhered to the form providing the most complete utilization of natural laws. The boiler is sectional in construction, with side and top manifolds or headers connected to each section with screw nipples. No connections are exposed to the fire, which greatly reduces the possibility of internal leakages often caused by expansion and contraction, or poorly made joints. The surface of this boiler is divided into deep vertical waterways over the fire chamber, placing a very large and effective area directly in contact with the fire. These water-ways have open flues at the top, giving additional surface and compelling smoke and gases to completely pass through and around them, thence to the back of the boiler. It then travels through the horizontal flues to the front, and then again through an upper tier of horizontal flues to the rear and smoke hood, thus utilizing the largest possible percentage of heat units obtainable. The absorbing surface, that is, the large hanging superficies exposed directly over the fire and the flue surface, is correctly and scientifically proportioned to absorb the greatest amount of heat units for the minimum quantity of fuel. In warm air heating, the improved "Thatcher Tubular" furnace, the "Scorcher," the "Meteor," the "Winner," the "Active," and the "Tubular" in battery form, comprise an important cluster in the new salesrooms. The "Tubular" is unsurpassed, being absolutely gas tight, having a large sensitive tubular fire surface and a properly proportioned pot. These important features insure against overheated air and the wasteful use of fuel. Astonishing results and enormous or wonderful saving of fuel are not claimed; but it is easily demonstrated that the construction gives the fullest possible amount of fresh, warm air with the least amount of fuel. The "Thatcher Combination Heater," hot air and hot water, is used in cases where they are situated so they can not be reached

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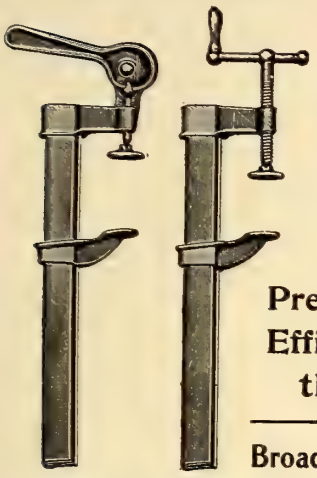

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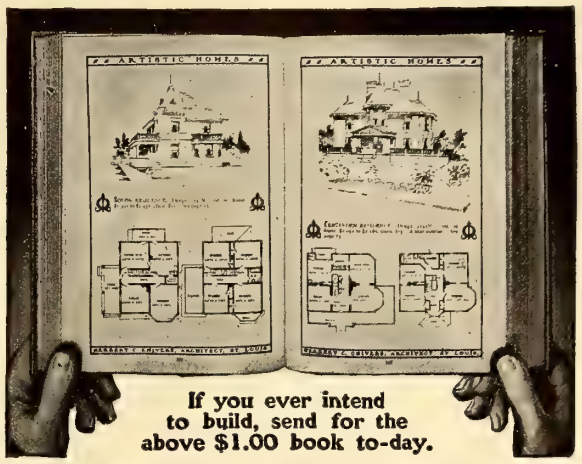

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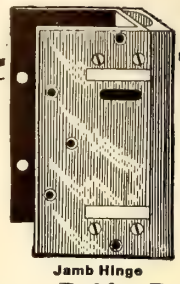

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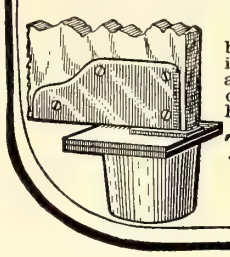

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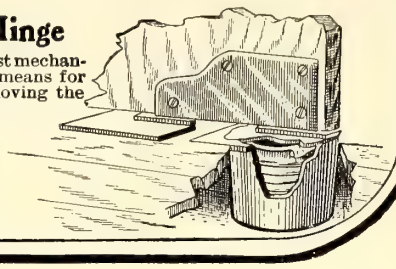

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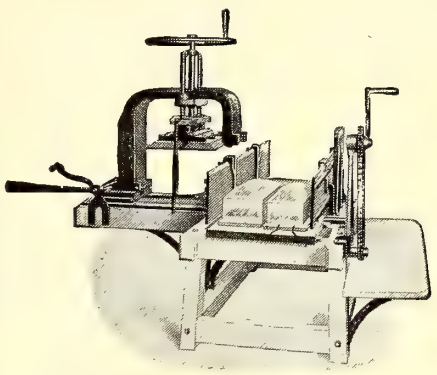

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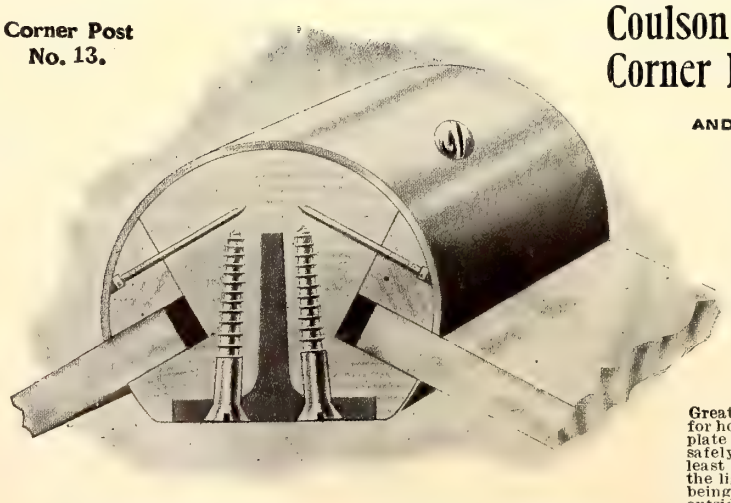

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U. S. Patent, November 19, 1901.
Canada Patent. March 19. 1900.
U. S. Patent, April 15, 1902.
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by hot air pipes or where additional heat is required. The heater is made by using a water ring and bell placed in the combustion chamber of the celebrated "Thatcher Tubular" furnace. This ring is connected with three one and one-half inch pipes to the iron bell in the dome, which supplies the system with hot water; the return is brought back into the water ring, making a continuous circuit. The "Tubular" furnace—portable and brick-set—has important features which none others possess. No complicated or concealed flues that fill up with ashes and soot are used in the construction. It is practically self-cleaning, and owing to its tubular build, which creates a rapid circulation, carries away the heat as fast as made, not allowing the air to become burned or overheated. From the sanitary standard it is unsurpassed, the flow of pure warm air being rapid and absolutely gas-tight. Many new designs, sizes and valuable improvements have been added to the line of ranges and laundry stores. The "Thatcher" range is beautiful in simplicity of lines, correct proportions and smooth finish. The facilities are perfect for cooking, roasting and baking. The ovens are large and well ventilated, allowing complete circulation of air, with an equal amount of heat on all sides; also sifting grates, ash pan and water-back of ample capacity, patent oven door opener, and triangular revolving grate, removable through the fire door opening without disturbing the fire lining or water-back. They consist of the double oven and single oven portable, double oven brick set, French steel, French steel double oven and French steel single oven ranges. The "Active" laundry stove is specially adapted for use in hotels, apartments and small families; the "Stirling" for use in hotels, institutions, apartment houses, etc. The firm makes column radiators for steam and hot water use; the window radiator; steam radiator valves; quick opening, male union, hot water radiator valves; automatic air valves; expansion and storage tanks; adjustable floor and ceiling plates; altitude and steam gages, and hot water thermometers. Bronze powders and liquids also form a valuable contribution to the output. Send for catalogues; the one on furnaces contains the "Miller" patent ventilating system thoroughly described and practically illustrated.

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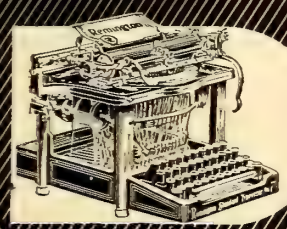

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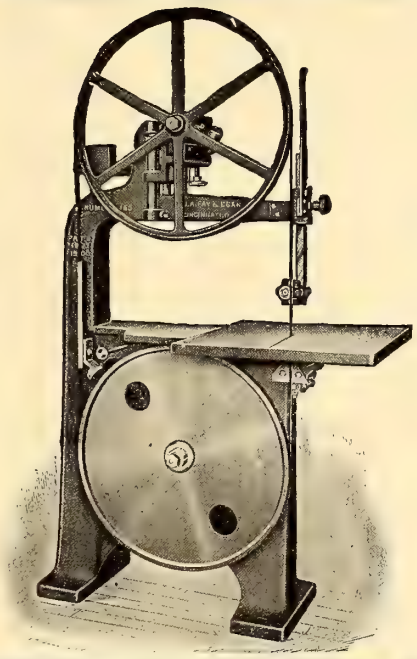

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Vol. I
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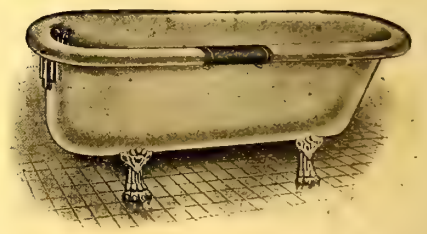

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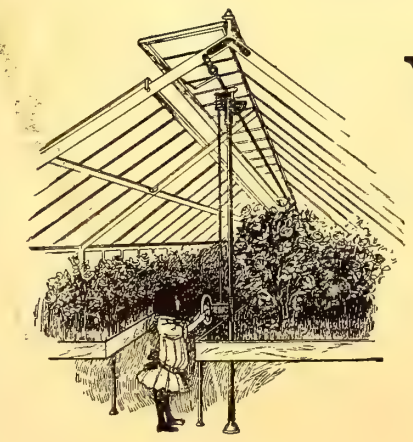

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Armor in Baronial Hall

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

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AMERICAN HOMES AND GARDENS

Volume I August, 1905 Number 2

JUL 31 1905

The Bridge Over the Upper Wissahickon

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

Monthly Comment

IS THERE a tendency toward over-richness, over-ornamentation, over-elaboration in American houses? The answer to the question depends, in large measure, upon the basis on which the judgment is founded. It has become rather the fashion, in certain publications, to decry the tendency of the well-to-do toward ostentatious display of wealth. The rich man's great house, his yacht, his special railroad car, his automobiles, his horses, his sports, his daily life are held up to public scorn by hysterical writers who, in most cases, view these objects and the persons owning them or directly concerned with them with the accuracy and nearness with which they might be seen through the reverse end of a telescope. As a matter of fact, these complacent guides to a simple life are not so intent on accomplishing reforms as they are in trying to make a few dollars for themselves by the sale of literary matter which, rightly or wrongly, seems to command a favorable market at the present time. If these scribes are to be believed, we are certainly in a bad way, for never before, in this land of the people, were there so many rich houses, so many houses richly built, so much wealth used for amusement and comfort, so much apparent ostentation.

YET all this display—if it be display—is quite natural and thoroughly in keeping with human nature. It is natural that any one who has the means should wish to live in a house that suits him; people of quite moderate circumstances sometimes attain that end, and most persons would like to. The rich man may not need, for the mere purposes of eating and sleeping, the vast palace on which he has lavished his hundreds of thousands; but he thinks he does, and having the money with which to gratify this desire he proceeds to expend it for this purpose. But he wishes to entertain his friends; he may have tastes in music and in literature; and so ballrooms and reception-rooms, billiard-rooms, music-rooms, libraries and other apartments, together with ample suites of bedrooms, are added, until the little space he needs for himself personally is surrounded by a host of apartments that convert the essential rooms into the parts of a great building.

THIS structure will be designed in a more or less splendid manner. Taste for architecture is strongly on the increase in America, even though real appreciation of it is not very evident. Our architects are now capable of designing buildings much more ornate than they were some years back. They have studied their art more thoroughly; they understand it better; they know better how to produce imposing results. Whether these results are in themselves good and admirable is quite another matter. We have not, unfortunately, got to the point where the mere amount of money spent on a house means, necessarily, a good house. But we are clearly able to produce better buildings than formerly, and the rich man desiring a great house can, if he so please, obtain more for his money in the way of good architecture than his father could or wanted.

ARCHITECTURE in America has been more furthered by the erection of large houses than by any other cause, save the construction of great commercial buildings. They have given our architects opportunities to design and build on a large scale and in a splendid way. It is true that, in many instances, both architects and clients have failed to realize the utmost of their opportunities, but they have greatly helped building industries, and have paved the way for still further progress in the future. The rich man, clearly, has the same right to his great house as the most fervent apostle of the simple life has to gratify his yearnings for plain living. A man is rightly expected to live according to his means, and the great house is simply an expression of this thought.

THAT the great house frequently fails to have artistic merit is regrettably true. And it is just in this that the great house most frequently fails. Mere expenditure of money will not produce good results in building or in anything else. Money must be wisely expended; it must be used for good ends; it must be spent for good objects; or it will be wasted and worse than wasted. But the rich man is not the only person who does not know how to get good results, artistic results, for his money. But his sins in this direction are more culpable than those committed by less fortunately situated folk, because if he does not know when a thing is good, if he does not know a good house from a bad one, if he does not realize wherein his own house is better or worse than other houses he sees and knows, he can obtain—for a consideration—more good advice, more ample instruction, more sound suggestion than he is likely to mentally digest for the balance of a long life.

IT is in this respect that the great house is most subject to criticism, and it is unfortunately true that it is often rightly entitled to it. One naturally looks to excellence in results from large expenditures, and the man able to buy good art and good building is quite as naturally expected to get his money's worth. A large house has some of the unavoidable characteristics of ostentation. It is big and spacious. It is provided with ample porches. It has a great servants' wing. It is placed in the midst of grounds so beautifully maintained as to immediately suggest expense, and quite necessarily so. Being structurally large, it stands erect upon its site, the beheld of all beholders. There is surely no weakening of the national constitution in this. The owner is certainly entitled to a house of such dimensions and on such grounds if he can afford it. If this is ostentation, it is an ostentation that can not be helped. And there is no reason at all why his house should not be a good house, even when judged by the most rigid of architectural canons. Good architecture is not so costly that it can not be bought, and sometimes at quite reasonable prices. But a bad big house is one of the most iniquitous things in the world. It need not exist, and has no reason for its existence.

BAD houses, however, need not be big to be artistic crimes, for a small bad house is quite as obnoxious, even though it be in a small way, as a large one. Fortunately there is less and less of such kind of building going on in the world, for people are realizing, more and more, the value of good building—and good looks in building—exactly as they appreciate more fully to-day, than before, the value of artistic things in everyday life. The change is a good one, even though the reason be the discovery that the monetary value of good houses is greater than those not so good. This can not be gratifying to national pride, nor to personal pleasure; but progress is being gained and results assured.

Notable American Homes

By Barr Ferree

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

THE WISSAHICKON is rightly regarded as one of the most picturesque streams in the eastern United States. Falling into the Schuylkill a short distance above Philadelphia—but within city limits—it runs a tortuous course through narrow ravines whose wooded sides have the charm of deep mystery, and which include some of the most fascinating scenery in that neighborhood. Beginning with an estate of less than fifty acres, Mr. C. W. Bergner increased his holdings, until they comprised three times that amount. He then called upon Messrs. Frank Miles Day & Brother, of Philadelphia, architects, to design him a house fitted for his place, and in due process of time one of the stateliest mansions in the vicinity was built here, on high, rolling ground, which commanded—for such was the nature of the site—limited home views, inclosed within trees.

It is a graceful, homelike dwelling, generous in size, stately in form, beautifully detailed, thoroughly individual and a fine example of its well-known designers' artistic taste in domestic architecture. It is the first province of a house to seem to be a home, and this quality the Bergner house has in an unusual degree. Its considerable size gives an aspect of great dignity, with an opportunity for large treatment which has been developed with extraordinary skill. It is a house, moreover, almost completely structural in its parts; there is little carved ornament, but sufficient emphasis and character is given by the trim of Indiana limestone, which forms an effective contrast with the local Jenkintown stone, of pale gray, well stratified and laid with broad ridge white pointing, of which the building is constructed.

The plan is markedly elongated. The central portion has a single gable on the Wissahickon front and two gables on the west front. Here is placed the main hall, emphasized by the great gable overlooking the Wissahickon and the dining-room and billiard-room. To the left of the grand staircase in the main hall is the drawing-room and the library and a corridor that connects with the vestibule, which, in its turn, opens directly from the porte-cochère. On the right of the main part of the house is the servants' wing, deflected toward the west or rear, partly to take these very necessary parts away from the main front, but more especially to conform to the topography of the ground, the hill rounding off here somewhat, practically compelling this treatment.

The Front Overlooking the Wissahickon

The West Front

The Garden

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

The entrance corridor is a broad passageway of sufficient length to have dignity in itself, and which, viewed from the vestibule, affords a vista across the main hall to the furthest wall of the billiard-room, which closes the main building. Like every part of the house, it is crowded with objects of interest, with furniture, old and new, with hangings and pictures and with bric-à-brac, which make the house almost a museum of objects of this sort.

Immediately to one's right is the library, lighted by a great baywindow that completely fills one end. It is designed with mahogany trim, and lined with bookcases to about three feet of the ceiling. Above is a rich frieze, and the ceiling, beautifully strong in color, is richly and minutely modeled from a Grolier book binding, a design singularly appropriate for a room used as this, and a design finely adapted to the rich manner in which the room is designed, and thoroughly in harmony with it.

The drawing-room adjoins the library and opens from it as well as from the entrance corridor. It is a white and gold room, very manifestly a lady's room, and designed and furnished in a very delicate style. The walls are hung with damask, and the fine fireplace of whitewood is decorated with a frieze of pairs of children, modeled after those of Michelangelo in the Sistine Chapel.

The main hall, which occupies the center of the house, is its chief room. Reaching from outer wall to outer wall, two stories in height, and lighted by a great mullioned window in either end, it is an apartment splendid in size and sumptuous in its architectural treatment. That the woodwork is oak of a deep, dark brown color is, perhaps, but a detail, but this strong, warm color is at once a background for the many objects placed within it and a setting for the splendid ceiling.

Architecturally speaking, the hall is inclosed within paneled walls, in the lower part of which are the doorways—with flat heads—to the adjoining rooms; while above, the wainscoting is stopped just below the springing of the elliptical arches, which open onto an ambulatory or passageway on either side. These arches, while closed below, are of sufficient dimensions to bring the inner wall of the passages into the scheme of the main hall.

The staircase occupies the center of the west end, dividing to right and left half way up, and connecting directly with the adjoining ambulatories. Behind it, on one side, is Mr. Bergner's private office, immediately connected with the billiard-room. On the other side, and in direct connection with the entrance corridor, is a private staircase to the second floor and a large coat room. This private staircase is a convenient device for reaching the upper floor without traversing the main hall, an arrangement of great convenience at times, and particularly so at periods of social festivities. Guests are thus enabled to reach the chambers in the upper floor set apart for cloak rooms, descending the main stair to the great hall in all the bravery of full-dress.

The architectural interest of the main hall centers in two features, the ceiling and the chimney-piece. The ceiling is of plaster, richly decorated with interlaced ribs arranged in graceful patterns and brilliantly colored. The ground color is blue, the effect of the whole room being one of splendid color, harmoniously developed and boldly applied, yet thoroughly satisfying and delightful.

The chimney-piece fills the entire central bay of the south side of the hall. It is built of Caen stone, and is large enough to contain an ingle-nook within its capacious shelter. It is finished in color, with two bands of ornament above and below its superstructure, decorated with shields of arms of the German cities with which Mr. Bergner's father had been associated in early life. The niches in the curved ends are in color, lined with gold toned down so as to be almost red, bringing out the green statuettes in fine relief. It is a splendid experiment in colored stone, carried out with a very sure hand, and altogether admirable in its effect.

The Desk in Main Hall

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

The Entrance Corridor

The Dining-Room

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

The dining-room is a green room, the color throughout being a rich, dull green. The woodwork is green; the ceiling is in green and gold; the furniture is of green leather, and the curtains and hangings are of a tapestry fabric of green. It is a beautiful and simple apartment, with a beamed ceiling, and the walls, for the most part, lined with china and glass cabinets. A chandelier of simple design depends from the center of the ceiling, and the lighting is completed with side lights of similar design. Green tones predominate in the adjoining billiard-room, for the green cloth of the billiard table necessarily gives the keynote to such an apartment, and it is difficult, if not impossible, to depart from such an essential color.

The Falls in the Upper Glen

The service wing, which adjoins the house on this side, is throughout, in all floors, given up to the servants. The serving-room immediately opens from the dining-room and connects directly with the kitchen. Then comes the servants' dining-room, the servants' sitting-room and the servants' porch on the furthest end of the house. Beyond this porch is an inclosed yard, also used for the domestic service of the house. Bedrooms and bathrooms for the servants are in the upper story.

The second floor of the main portion of the house is, of course, given up to bedrooms. The owner's bedroom is to the extreme south of the house, and is the largest room on this floor. It is joined with

The Porch

The Estate of C. W. Bergner, Esq., Ambler, Pennsylvania

a bathroom containing a bath of unusual size. The roof of the porte-cochère forms an upper porch connected with this room, and is an agreeable resting place of a hot evening. Another bedroom and bathroom completes the rooms on this side of the main hall, and other rooms of the same kind fill up the space on the north side.

The third story also contains bedrooms and bathrooms, chiefly available for guests. It has, in addition, two special features of unusual interest. These are a dormitory, as it is called in the nomenclature of the house; a large apartment in which a number of men can find sleeping quarters in crowded times. The other feature is a vast array of closets, devoted to every possible purpose, a housekeeper's delight of unusual extent and an arrangement as novel as it is useful.

It need hardly be said that a house of this description is provided with every possible convenience for use, and represents the very highest achievement in house building. It is a house whose architectural treatment within is as fine as it is without. Necessarily there can be little relationship between the two. The stately sobriety that characterizes the exterior gives way, as a matter of course, to an enriched and varied interior. Yet a prime essential of all household design, both within and without, is character, which this house has in an exceptional degree. The architects' opportunity here was of a kind to delight the trained and artistic designer, and a very great deal of latitude, and certainly very generous support, was given to the efforts of the Messrs. Day to produce a house that would be at once notable and successful in its domestic qualities. Their province was not to design a "grand" house, but a good one, and they succeeded in this to an eminent degree.

Like many large houses that of Mr. Bergner is filled with a rich collection of furniture, gathered by the owner, and disposed without reference to the architecture of the rooms. A certain amount of incongruity necessarily resulted from this, but so much of the furniture is good in itself, and its very abundance speaks so loudly of good intentions, that the responsibility for it needs only to be noted.

Like every considerable estate, the property of Mr. Bergner contains a number of subsidiary buildings, each necessary to his well-being, and each essential to the living qualities of the dwelling. The house itself is, of course, the most important structure on the estate, the building for which everything else was erected, and the center, both literally and almost geographically, of the entire property. These subsidiary buildings include a power house, barn, conservatories, stable, spring house and a tennis court. The property includes land on both sides of the Wissahickon, which, almost in line with the house, is crossed by a graceful rustic bridge. The glen, of which an illustration is given in the photographs, is a minor stream that runs through the estate, to which it particularly belongs. One need not add that the scenery around this spot is picturesque in a most eminent degree, for the photographs show that as well as photographs can, although the lover of the Wissahickon will loudly proclaim that no mere picture can portray or reproduce the wild grandeur of that lovely spot and properly convey its delights to those who have not seen it.

The Residence of Mrs. Lucy B. Chandler

Chestnut Hill, Massachusetts

ON page 89 is an illustration of a house recently built for Mrs. Lucy B. Chandler, at Chestnut Hill, Mass. The design is simple in character, yet interesting in its detail, while it is very pleasingly placed among a group of oaks, which form a good setting for the house. The house rests upon a foundation of split and natural faced local stone. The whole of the exterior of the building is covered with shingles. The body of the house is stained a warm hemlock brown, while the trimmings are painted white. The roof is covered with natural shingles. The doors and blinds are painted bottle green. The chimneys are of red brick laid in Flemish bond. The entrance is into a vestibule, through which the living-room is reached.

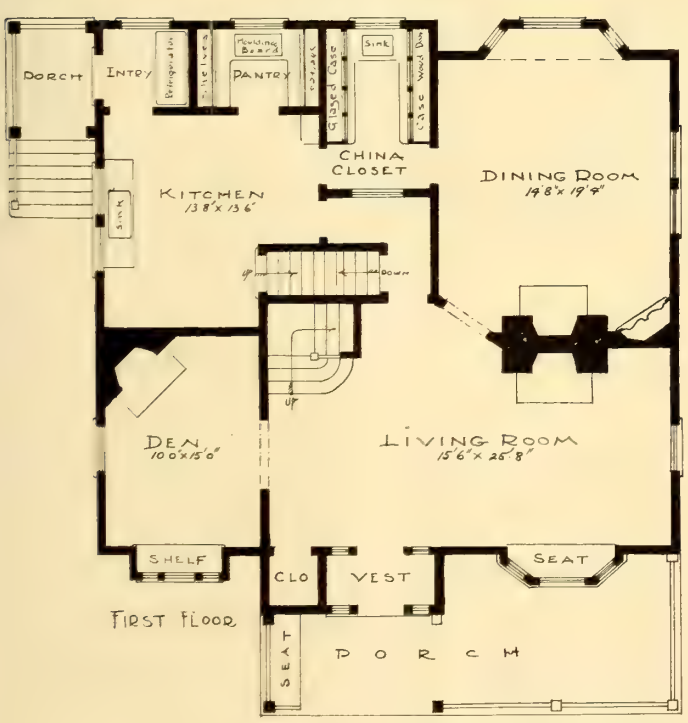
The living-room is treated with white enamel paint, and has a paneled dado, formed by the placing of a chair rail three feet from the floor, with a plaster base, and the whole painted the same color. There is a baywindow at the front furnished with a seat, and an ornamental staircase with turned posts, balusters three to a tread, and a mahogany rail. The fireplace is built of brick, with facings and a hearth of unglazed tile, and a mantel of Colonial style.

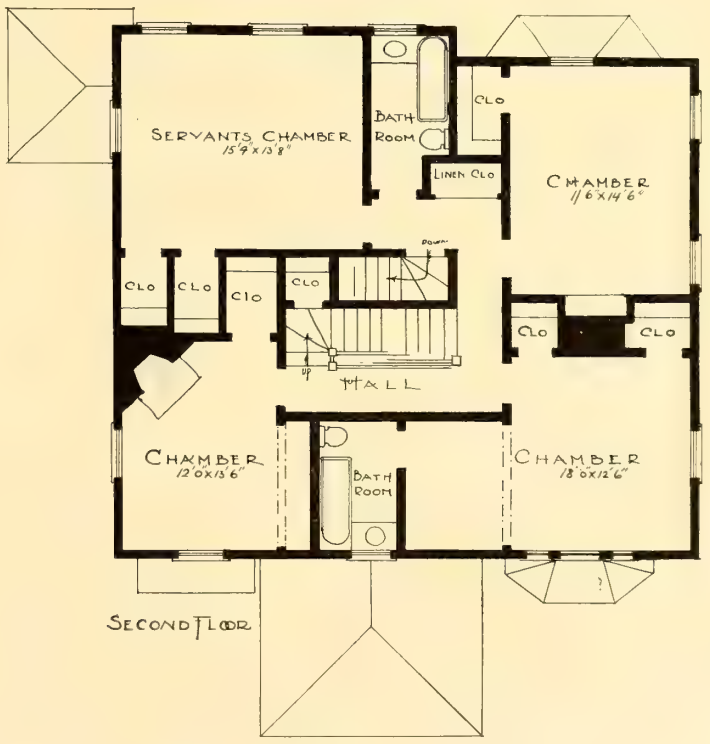
The den, opening from the living-room, is placed to the left of the entrance; it is trimmed with cypress, which is finished in a soft Flemish brown. It also has a baywindow with seat, and an open fireplace built with brick facings and hearth, and provided with a mantel of Colonial style.

The dining-room is treated with white enamel paint, and has a wainscoting five feet six inches in height, which is formed by placing moldings on the plaster wall and leaving the plaster to form the panels; the whole is painted white with good effect. Above this wainscoting the walls are covered with a tapestry wall decoration. This dining-room has a corner china closet of the Colonial style built in, and an open fireplace with brick facings and hearth, and a Colonial mantel. The china closet between the dining-room and the kitchen separates the two, and precludes any possibility of the kitchen odors permeating the remainder of the house. This china closet, of slight dimensions, is fitted with china cupboards, drawer, dressers, etc. The kitchen is furnished with all the best modern fixtures, a large store pantry, and a lobby large enough to admit an ice box.

The second story is trimmed with whitewood painted white. This floor contains four bedrooms, seven closets, linen closet and two bathrooms. The latter are furnished with porcelain fixtures and exposed nickelplated plumbing. One of the bedrooms has an open fireplace, and two of them have alcoves. Two bedrooms and a trunk room are on the third floor. The cellar, cemented, contains a heating apparatus, fuel rooms, laundry, etc. The whole house is built in a thoroughly first-class manner, with good material and workmanship, and without any elaborate detail being used in the finish. The hardware which is used through the house is of brass, with glass knobs in the main portion of the house, and white porcelain in the servants' quarters. The floors throughout are of hardwood, best quality of rift hard pine being used in the first story and cull from the same in the second story. There are bells from all the rooms to the kitchen, with an auxiliary bell to the servants' quarters, and also a speaking-tube from the second floor to the kitchen. The house is lighted by gas and electricity.

Mr. Ernest M. A. Machado, architect, 9 Cornhill, Boston, Mass.





The Residence of Mrs. Lucy B. Chandler, Chestnut Hill, Massachusetts

The Residence of Alfred Skitt, Esq.

Yonkers, New York

THE residence of Alfred Skitt, Esq., is located on almost the highest point of ground in upper North Broadway, Yonkers, and overlooks the Hudson River. On account of the prominence of its site, as well as its exposure, a special scheme of construction was found necessary in order to secure a comfortable arrangement of the plan in combination with a pleasing architectural effect.

The house is built of a combination of stucco, brick and wood, with a detail of English feeling for the exterior. The entire outside is covered with cement, soft gray in color, and just rough enough to avoid the appearance of unevenness, so prevalent with smooth surfaces, and at the same time lending character and tone to the exterior effect. All of the wooden trimmings, beams, corbels, brackets and over-hanging eaves are of natural chestnut, finished about the color of English oak. The whole is surmounted with a roof covered with a red Celadon, close shingle roofing tile, which harmonizes well with the chestnut, the verde-antique of the copper gutters, leaders and flashings and the soft gray stucco of the side walls.

The Entrance Porch and Porte-Cochère

The entrance is from the porte-cochère at the north side of the house, which has been inclosed with glass From the entrance porch access is obtained of the terrace, which extends across the front, beyond which the piazza is placed, opening also from the living-room, and thus creating a privacy for the family and their intimates which could not possibly have been provided if the entrance and piazza were united, as is usually the case.

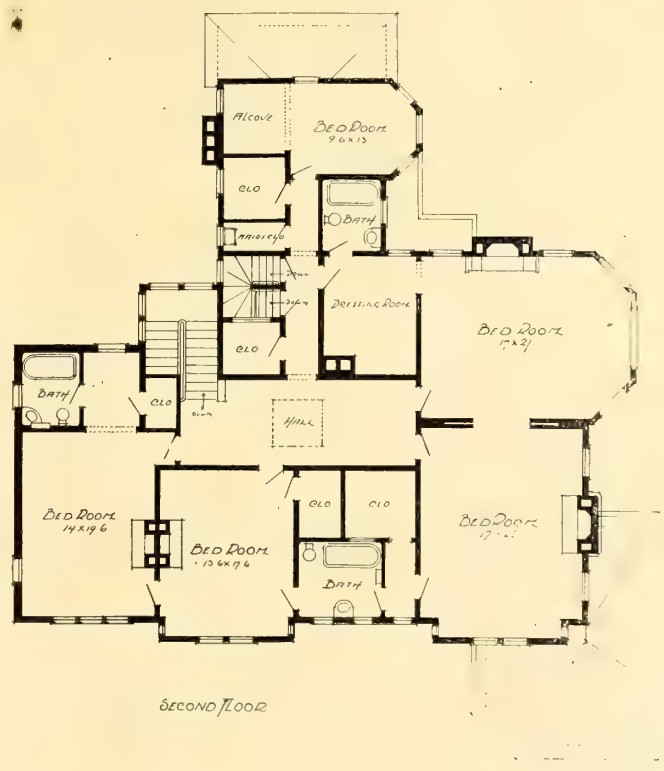
The vestibule and entrance loggia have a floor finished with mosaic tile, and the former has a wainscoting of yellow pavanazzo marble. The woodwork is of yellow mahogany. The main hall, together with the stairs and alcoves, is trimmed with old English quartered oak. The fireplace has facings and a hearth of pavanazzo marble and a handsomely carved mantel. The reception-room is hung with textile, and is finished with cream white enamel. This delicate scheme is carried out in the furnishings and fittings of this room.

The library, including bookcases and mantel, is trimmed with mahogany. The large open fireplace has facings and hearth of senna marble. Opening out of this room is the dining-room, which is finished in Flemish oak, with hand-carved panels of very beautiful Venetian design, imported direct, and arranged to fit the wall spaces. All the furniture of this room is in keeping, and with the dull wall effects of light metallic tones, together with leaded glass of appropriate design, makes a very pleasant dining-room and a harmonious whole.

The kitchen and butler's pantry are planned on a most generous scale, and are furnished with white enamel tile wainscoting and all the best modern conveniences.

The second story contains four large bedrooms, dressing-rooms, three bathrooms, maid's room and large clothes presses. This floor is treated with white enamel trim, and the walls are covered with artistic decorations. The bathrooms have tiled floors and wainscotings, porcelain fixtures and exposed nickel-plated plumbing. The servant quarters, trunk room and storage space are placed in the attic. The cellar contains the laundry, heating apparatus, fuel rooms, etc. The stable, which is so necessary an adjunct of the country house, is designed in the same style as the dwelling, and is built of similar materials. It has, however, a pronounced individuality of its own, and clearly proclaims its purpose and its use. It is planned and arranged in the best modern style, and is fitted with the most approved conveniences for the horses and carriages and for their rapid handling. The coachman's quarters have been placed in the upper story, and are both convenient and pleasant. The whole property has been well developed, and has been arranged with great care and skill.

Mr. Bradford L. Gilbert, architect, 50 Broadway, New York, N. Y.



The Residence of Alfred Skitt, Esq., Yonkers, New York

A Quiet Retreat

The Stable

The Residence of Alfred Skitt, Esq., Yonkers, New York

"Heim Mere," the Summer Home of Louis L. Hopkins, Esq.

Manchester, Massachusetts

PASSING the many attractive houses that command attention, on the road from Beverly to Manchester, there is none more picturesque than the one recently built for Louis L. Hopkins, Esq. The house sets well back from the highway, and the broad expanse of velvet lawn is bounded by a low stone wall, which is nearly hidden from view by a mass of clinging vines. Beds of flowers dot the lawn at the front and at the sides, and at the back are lines of willow trees and masses of shrubbery.

The approach is by an avenue which winds itself from the main entrance and around a circular roadway to the front. In the center of this circular roadway there is placed a massive bed of hydrangeas, which are, in the latter part of the summer and during the autumn, a mass of bloom with their ever-changing colors as the season advances. Large pots of the hydrangea hortensia grace the steps at either side of the entrance door. A wide path from this driveway leads to the rear of the house, where the grounds extend to the water's edge. On one side of this spacious lawn is the stable, which is large enough to accommodate the horses and carriages and the coachman's quarters overhead.

The Entrance Porch, Showing a Bed of Hydrangea Paniculata in the Center of the Roadway

The house itself is most attractive in its combination of gray stucco, red-brown shingles and white painted trim, and with the green vines clinging to its sides makes a most artistic picture. Wide verandas are placed at either side of the house, the larger one being at the rear, facing the water, and both are covered with vines; the white clematis abounding profusely and adding much to the artistic appearance of the house. The grounds at the rear of the house are even more beautiful than those at the front, with their many beautiful flowers and the broad sward of the green velvet lawn.

The main entrance to the house is from the low front veranda, and through a vestibule to a reception hallway, with Doric columns, supporting the balcony of the main landing of the staircase. The hall, which is fitted up for a living-room, is furnished with white enamel trim. It has a paneled wainscoting, above which the walls are covered with an embossed paper of a yellow and white design, and the whole finished with a wooden cornice.

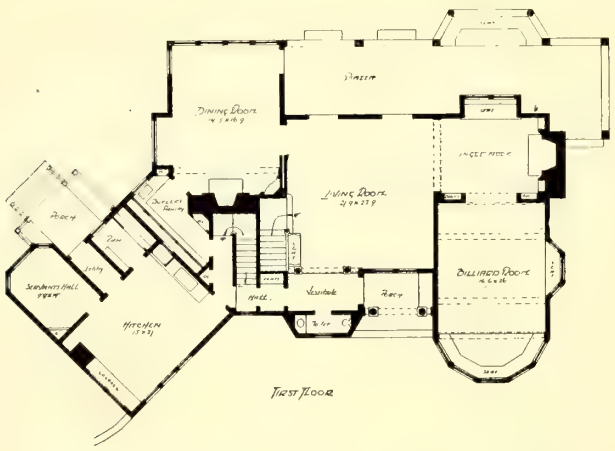
Opening from this hall is the ingle-nook, containing an open fireplace with brick facings and hearth and a handsomely carved mantel. On either side of the fireplace are low bookcases built in, and, with a comfortable chair, provides a quiet retreat. The ingle-nook forms the entrance to the billiard-room, which extends to the edge of the verandas, and with one of the many windows, a French one, opening onto the veranda. This room is trimmed with mahogany and has a high paneled wainscoting finished with a plate-rack, filled with many handsome golf trophies. The wall space above this plate-rack is covered with leather and the ceiling finished with heavy molded beams.

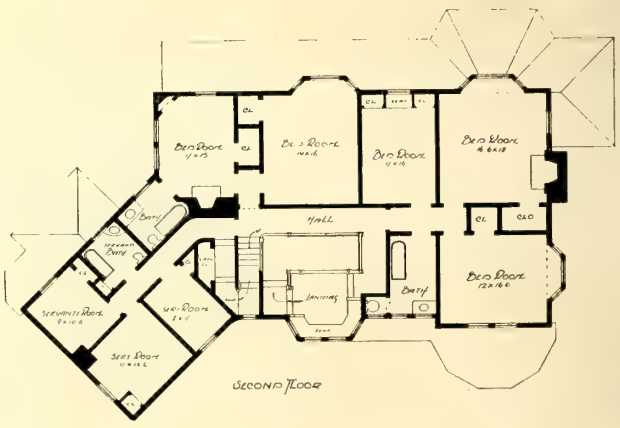
At the left of the hall is the dining-room, one of the most pleasant rooms in the house, with an extensive ocean view from the circular baywindow at the end. The trim of this room is treated with white enamel paint. This room has a low paneled wainscoting of Colonial character, a wooden cornice and an open fireplace, which is particularly handsome with its exquisite carving and paneled over-mantel.

The second story contains the owner's suite, with private bathroom, guests' rooms, and the servants' rooms and bath, which are placed over the kitchen extension, with a private hall and stairway leading to the kitchen. The main bathrooms are very handsomely fitted up with paved tiled floor, wainscoting of glazed tile, porcelain fixtures and exposed plumbing, all nickelplated. Extra guest rooms and trunk rooms are provided for on the third floor, while the cellar contains the heating apparatus, fuel rooms, etc.

Mr. William G. Rantoul, architect, 6 Beacon Street, Boston, Mass.

"Heim Mere"—The Front





"Heim Mere"—The Rear

"Heim Mere"—The Dining-Room

"Heim Mere"—The Hall and Staircase

The Residence of Charles F. Droste, Esq.

Montclair, New Jersey

THE house built for Charles F. Droste, Esq., at Montclair, N. J., is designed in the English style that was contemporaneous with our Colonial period. The first story and two gables are built of selected common brick, laid Flemish bond in red mortar, with raked-out joints and the headers projecting one-half inch beyond the plane of the stretchers. The semicircular staircase tower is built of frame covered with expanded metal lath and then rough plaster, the whole of which is crowned with a copper finial. The sills, coping and floors of the vestibule and piazza, as well as all the steps, are of artificial stone of a light gray color. The remainder of the house is built of frame, covered with ship-lapped hemlock boards, building paper and red cedar shingles, the latter stained red, except the small roof, which is stained a moss green. The trim is painted white.

The Terrace Steps

The central hall of the first story is trimmed with whitewood painted a cream white, except the doors, which are stained and finished in mahogany with rubbed-down varnish. The rails and treads of the stairs are of birch finished the same as the doors. Around the hall is a wooden cornice, behind which the electric lights are concealed. The diffusion of light from this arrangement is very effective. Back of the hall, and separated from it by fluted Roman columns, is the reception-room, which is treated the same as the hall. The walls are hung with a green paper.

To the right of the hall is the living-room, the walls of which are paneled with broad battens of quartered oak to the height of the doors and windows, the spaces being filled in with olive green burlap. The space above the plate-rack, which extends around the room, and the ceiling are tinted a pale green. The angle between the side walls and the ceiling is paneled with two moldings.

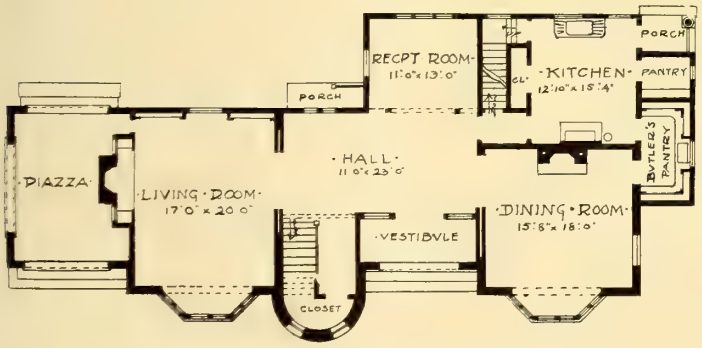
The walls of the ingle-nook are entirely covered with small-faced brick of a soft brown tone in a combination with the buff brick mantel. Bookcases are built in at one end of the room, at one side of which there is a door opening into the private porch. The woodwork in this room is stained a dark brown and is finished in oil.

The dining-room is trimmed with whitewood stained a Flemish brown. The walls are covered with tapestry up to the height of the door casings, and the whole is finished with a plate-rack. The tone of the tapestry is blue, green and brown, and the walls above the plate-rack and the ceiling are tinted a light brown. The mantel is of special design, and contains a china cabinet, while the facings and hearth are of brick.

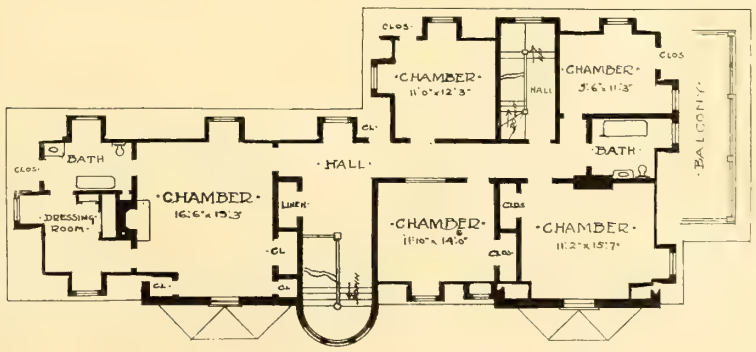
The butler's pantry is trimmed with cypress and finished with spar varnish, and contains a sink, china closet, cupboard and drawers. The kitchen is treated in a similar manner, and has an imitation tile wainscoting four feet in height, and is furnished with all the best modern appliances. The second floor contains five bedrooms, one dressing-room and two bathrooms. The entire trim of these rooms is of whitewood painted cream white. The bathrooms have tiled wainscotings and floor, and are furnished with porcelain fixtures and exposed nickelplated plumbing. The floors throughout the first and second stories are double, the upper one being of hardwood.

There are three bedrooms and a servants' bathroom on the third floor, besides ample storage spaces. The cellar contains the laundry, heating apparatus, fuel room, cold storage, etc. The house is heated by steam, indirect on first floor and direct for the balance of the house. The lighting is by gas and electricity. The house is a picturesque structure picturesquely placed in a site admirably suited to it.

Mr. Albert F. Norris, architect, 150 Nassau Street, New York, N. Y.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

The Residence of Charles F. Droste, Esq., Montclair, New Jersey

The Dining-Room

The Living-Room

The Residence of Charles F. Droste, Esq., Montclair, New Jersey

"Crow's Nest," the Bungalow of Dr. J. H. Huddleston

Navesink Highlands, New Jersey

JUST before reaching the attractive and interesting little station at Water Witch, as the train from New York leaves the steamer pier, it passes along with the coast on the one hand and a rapidly rising woodland on the other. From the little station at Water Witch a winding roadway circles itself up to the summit of Navesink Highlands, and just before reaching the top, and at the turn in the road, is the bungalow of Dr. J. H. Huddleston.

The style of the Swiss farmhouse, with over-hanging eaves and brackets, was adopted for the design of this building, and it plays a very effective part in its conformity with the site, which recedes with a steep decline.

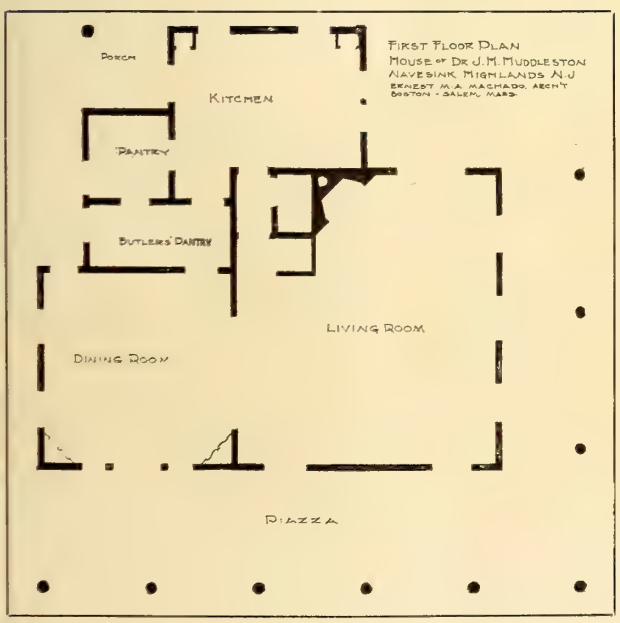
The exterior woodwork throughout, excepting the moldings, is left rough as it comes from the saw. The covering for the outside is formed by what is commonly known as "siding," except that in this case it is made very wide in the basement, and about eight inches for the rest of the wall, and is left rough as it comes from the saw. The entire building is stained a dark hemlock brown, with the blinds treated a darker shade. The roof is covered with shingles, and is stained a dull green, which blends well into the green colorings of the over-hanging trees. The foundations are of large cedar and locust posts with the bark left on and braced diagonally with smaller poles of the same kind. Only a portion of the cellar is inclosed.

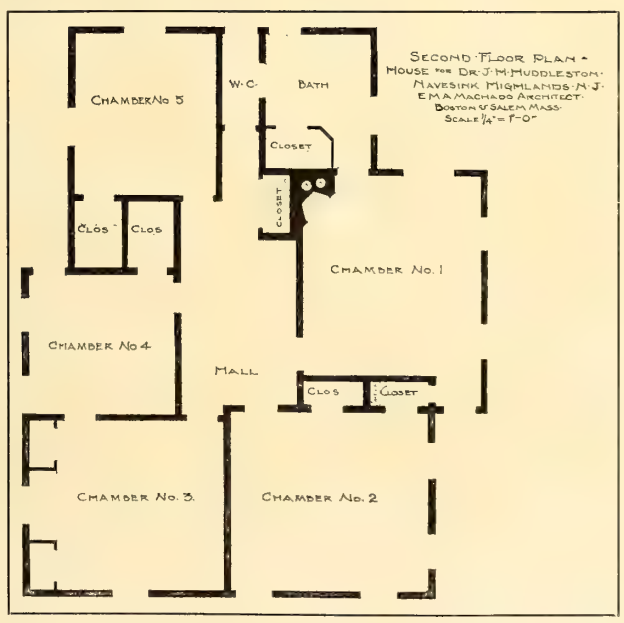
"Crow's Nest"

The plan shows a large living-room, dining-room and a kitchen with its dependencies on the first floor, and five bedrooms and bath on the second floor, while the servant quarters are placed on the third floor.

The interior of the first story is either sheathed with rough sheathing, or the rough boarding showing back of studs; in some places heavy sheathing paper of different colors is used between the studding and boarding in order to secure a decorative scheme. This is a very inexpensive decoration, and gives a very artistic and pleasing effect; the woodwork being stained either the same shade or a shade that will harmonize with the paper.

The living-room is fitted up in an attractive manner, with the studding and floor beams exposed to view. Cross beams are cut in between, and book shelves are placed at various points along the wall. The staircase rises out of this room, and has a simple





"Crow's Nest"—The Living-Room

balustrade with newel post. The fireplace is built of rough brick with dark headers, and all laid in Flemish bond. The facing of the fireplace rises up to the ceiling, and its height is broken by a rough-hewn shelf, supported on similar brackets, all of which have retained their bark. A long settle, built of rough-sawn stuff, forms a very inviting retreat beside the fireplace.

The dining-room opens from the living-room by a broad arch, so that when occasion demands both rooms may be thrown into one. This dining-room is treated similarly to the living-room, and is furnished with corner cupboards and shelves over the same. The butler's pantry, which is fitted up complete, forms an entrance to the kitchen, which is also fitted with all the necessary improvements, including a large store pantry. There is a stairway to the cellar, and the rear stairway to the second story is in combination with the front staircase.

The second and third stories, with the exception of two rooms, are plastered throughout with rough finish. The two bedrooms referred to are sheathed from the floor to the ceiling with rough matched boards, and are stained, giving a very soft and pleasing effect after the room is furnished.

The floors throughout the house are of hard pine. The hardware on the inside of the house is of iron. The house has electric bells and thoroughly modern plumbing. There is no paint used on the inside of the house, for everything is stained in brown, gray and green, so that the interior effect is most harmonious and ideal for a summer home.

Simple as this house is in design, it is an excellent illustration of the possibilities of the bungalow type of dwelling. It contains, as the plans show, and as the descriptions and the photographs of the interior make clear, but two main rooms on the first floor. Yet these two rooms, the living-room and the dining-room, are in themselves quite sufficient, with the kitchen and its dependencies, to make a complete house—a house complete in essential apartments, and, in this particular case, of sufficient size to make them thoroughly adaptable to every essential requirement.

An analysis of the plans shows how very admirably this result has been secured. The first story plan shows the house to consist of three cubes, one for the living-room, one for the dining-room, and a third for the kitchen. This is speaking generally, of course, for the dimensions of these rooms are by no means cubical. The comparison, however, shows the simplicity of the plan in its basic form. The ffices which form the spaces subsidiary to the kitchen are outside the basic cubes of the first floor, but are necessary to the convenience of the dwelling.

Artistic expression is given to the house by the porch, which surrounds it on two sides, and the built-out upper story of the second floor. This arrangement entirely modifies the aspect of the building and thoroughly removes the cubical idea from the upper story. There are, of course, to be found the bedrooms and the bathroom, all of which are entered from a central hall. This second story is economical in the disposition of the space and is quite beyond criticism.

"Crow's Nest"—The Fireplace in Living-Room

"Crow's Nest"—The Living and Dining Rooms

Here, then, is a very simple dwelling, unpretentious in its structure and its development, yet a very charming house to live in and amply equipped with every essential convenience. The design is an extremely happy one for the situation, the house and the site having that direct relationship to each other which characterizes every good house, and which, when combined with fine artistic treatment, as in this instance, sums up about all the requirements that can be demanded of a dwelling house.

Apart from the plan and the arrangement the qualities of this house which particularly call for consideration, and which most decidedly assert themselves, are its picturesqueness and its charm. The surroundings are, of course, picturesque in the extreme, that is the fortunate characteristic of the locality in which "Crow's Nest" is built. It would have been a misfortune—an artistic calamity—had this delightful setting been ignored in the design of the exterior. The picturesque was, therefore, forced upon the architect as the basis of the architectural expression at the very beginning; and, as the illustrations very happily show, this was followed to the end.

The charm of the house is also due to this circumstance. The picturesque is always charming and always interesting. An architect with a keen sense of the value of the picturesque could not have made a failure of his design if given full swing for the display of his talent at the outset. This undoubtedly happened in this case, and hence the artistic success of this little house was assured at the commencement of the work.

But the house is picturesque within as well as with. This is another quality quite indispensable in a dwelling of this sort, and which follows from such an exterior as a matter of course. It is not always possible to make an interior correspond with the exterior in style or in treatment. It is not only not always possible to do so, but in many cases—perhaps in most cases—it is q uite out of the question to accomplish such a result. The interior necessarily differs from the exterior, for the latter is but a sheathng and a cover to the former.

There are times, however, when a certain kind of an exterior suggests and calls for a certain kind of an interior, and "Crow's Nest" is precisely one of these. The interior rooms, their shape, size, arrangement and furnishing, are exactly what might be looked for in a dwelling built and placed as this one is. In this respect the house is quite remarkable and worthy of more study and attention than it might, judged by its size and purpose, receive.

Mr. Ernest M. A. Machado, architect, 9 Cornhill Street, Boston, Mass.

"Crow's Nest"—A Rear View

Angoras for Pleasure and Profit

By George E. Walsh

An Angora Buck

ALTHOUGH the Angora goat exhibits little of the bellicose nature which characterizes the common goat of the city squatter's cabbage patch, yet in lordly appearance and majestic mien the buck looks for all the world as pugnacious as any four-footed beast. Timidity is not an implied quality thereby; in certain seasons and conditions an Angora buck is perfectly capable of asserting his primitive rights, and even the meek-eyed does and kids have powers for self-defense not fully appreciated. But, as a rule, Angoras are gentle, affectionate and susceptible, in a remarkable degree, to the gentle art of petting.

As exceptionally useful and beautiful ornaments for any country estate, they are worthy of careful attention and study. Unfortunately the embellished press accounts of their early importation in this country, and the wonderful profits they promised to yield to the slothful and lazy, created a prejudice against them in many quarters. But now that the boom has subsided, and the goats have become creditable inhabitants of hundreds of our farms and country places, a true appreciation of their worth is possible.

All goats, of whatever breed and tribe, are nuisances unless properly fenced in pasture fields. No exception should be made to the Angora, and whether the inclosure goes by the name of pasture, park or pen, the results are practically the same. On the farm a flock of Angoras reclaim and clear wild, bushy land at little expense, and on the small country place they graze upon pasture of weeds and bushes with evident relish. The valuable fleece, meat and pelt bring to the fancier a profit which adds materially to his income.

Brushy pasture land or second-growth timber parks make ideal locations for the Angora flocks. Low, swampy lands are not so suitable for the animals as moderately elevated regions. They are better investment than sheep for clearing new ground. A one-hundred-acre inclosure of fair soil and pasture will support upward of sixty to one hundred and fifty does. If the flock is not properly nourished on such a park or private inclosure, a little hay and grain fed at night will equalize the food ration.

A Flock of Nearly Two Thousand Angoras Photographed at Ward's Ranch Manor, Sullivan County, New York
The Largest Flock in the East

A natural pasture or second-growth timber field fenced with wire netting, three or four feet high, will accommodate a flock of Angoras. The cost of inclosing ground with wire netting averages $100 per mile, and with plain fencing wire about $60. This includes posts placed firmly in the ground every twenty to thirty feet, with a string of barbed wire on top and wooden stays, one by two inches, to stiffen it, and close netting that will keep the kids from crawling through

or under. To inclose a one-hundred-acre field would thus cost from $200 to $300, according to the quality of the wire fencing and the cost of labor and posts. A smaller inclosure for a dozen or two goats would cost proportionately less.

As a profitable investment it does not pay to keep less than fifty to sixty Angoras, but for fancy stock any number desired can be raised on a place of only a few acres. Lovers of fancy-bred stock raise with success, in various parts of the country, ten and fifteen does on natural woodland pastures of only a few acres in extent. A dozen may be raised on five or six acres if a little extra feeding is given at night time.

There are upward of fifty thousand thoroughbred and cross-bred Angora goats registered in this country, and this number is being annually increased. The pure-bred does sell all the way from $10 to $30 a piece, with bucks ranging from $25 to $150. Price is, after all, purely relative, and it is not always a true indication of the real value of the animal. Frequently a $75 buck will yield more fleece a year than a $100 animal. But fineness and density of fleece are points to consider as well as weight and length.

It is a safe rule among breeders of Angoras that only the best pay. The $100 buck that shears six pounds of fleece in the South and nine pounds in the North each year is much

A Rancher and His Pet Angora

more profitable as the head of a flock than a $50 buck which shears only from five to six pounds. The buck is the determining factor of the herd. He makes the flock and its future standing. Good does count, too, but the pure-bred buck is all-important. The relatively high cost of the buck consequently makes a small flock somewhat doubtful from a financial point of view, although for the fancier such considerations may have no weight.

The does shear all the way from four to six pounds of fleece a year. Many of them are sold on "guaranteed clips." The Southern Angora does, however, will shear from one-third to one-half more when shipped North and once acclimated. The acclimation of the Texas-bred Angoras is frequently a point of trouble with the amateur breeder or keeper. Does frequently show a propensity to sicken and die in our colder climate, which is heart-breaking to the purchaser. The time of shipment North is often responsible for these losses. Shipments are made at almost all seasons, including the very late winter and early spring months. But, as a rule, the summer shipments have proved the most successful. This is due to the mildness of our Northern summers, which permits the does and bucks a short season in which to get acclimated. Winter shipments im-

Fine Specimens of Lordly Bucks

pose a hardship upon the constitution of the animals that often proves fatal. When brought North in summer or early autumn, the goats get accustomed to their new quarters and climate before cold winter weather sets in. Bucks can be shipped during much more rigorous weather than does or kids, for their naturally hardier constitutions enable them to withstand climatic changes.

The demand for Angora fleece is steadily on the increase in this country, and the textile industries annually find ready consumption for all that the imported animals can produce. The silky, long, lustrous fleece always commands the higher prices, and the demand for it is greater than for the short, coarse and lusterless hair. The mohair spinners require well-assorted hair. The necessity of keeping flocks with fleece as near alike in length and quality is, therefore, quite apparent.

In selecting Angoras the density, fineness, length of staple and type of mohair must be kept in view. When the fleece shows uniformity of length and texture, the flock is rated high, and the prices obtained for it correspondingly good. High-priced bucks, next to increasing the quantity of the annual clip, are supposed to improve the fancy points of general value. Chippy and brittle mohair is of little value, and also the dead, lusterless fleece. Hair that grows long and fleecy on the upper part of the body, but poor and short on the chest and below, will show up unevenly in the clip, and cause so much trouble in sorting that the average value is lessened one-half. Likewise hair that is very coarse on the neck and chest, but silky and fleecy on the flank and shoulders, will not sell as the best.

Angoras as Useful Pets

The breeding of the Angoras is, therefore, a matter of careful attention to the details of the mohair crop. Length of staple, fineness of each fleecy hair, even and uniform growth all over the body and density of yield are all points that the fancier considers, and which the owner raising the goats for profit should equally emphasize. In pure-bred goats fine mohair is, in time, produced on the hind legs to the very hoofs, and to the very tips of the ears and tail. It is all a matter of careful breeding and feeding.

The Angora park or inclosure needs ample shed space for the goats to find shelter from storms and for sleeping at night. In the winter season the barns or stables should be wind-tight, free from drifting snow or rain, carefully ventilated and kept in clean, sanitary condition. The quality of the fleece will depend a good deal upon the winter treatment of the animals. Although natural roamers in the pure air, the Angoras get their fleece wet and matted in summer or winter, and if the sheds and stables are not kept clean the filth that attaches to the hair may breed skin diseases. Lice, ticks and other vermin find favorable cultural grounds in wet, matted, filthy hair of sheep or goats. Such troubles can be largely avoided by keeping the sheds and stables absolutely clean and fresh, and, if necessary, frequent washing and combing of the fleece should be practised.

It has already been said that there is little or no profit in Angora goats raised in small flocks of less than fifty or sixty; but if the initial expense of inclosing the pasture with wire fence can be dispensed with this conclusion may not always be true. Where a natural pasture or woodland has already been inclosed, a few goats could be turned upon it with a chance of fair remuneration.

The fancy breeder, however, considers qualities which appeal to the eye rather than to the financial possibilities. The Angora goat becomes to him a pet and companion. With an agreeable disposition and fine companionable qualities, the doe or kid is easily made a pet on the country place. Even the buck is not an unworthy pet, and if properly treated he will develop qualities of attachment worthy of all admiration.

Caught on the Stump

The fleece of the Angoras, under the name of mohair, enters largely into the manufacture of plush goods. Textile mills employ it extensively to give a silken finish to woolen goods. The fleece brings, just as it is sheared, from twenty-five cents to one dollar a pound, the price depending upon the quality of the hair. As a rule, the young Angoras yield the finest and heaviest fleece, and when long and lustrous the outside quotations are obtained. Shearing is done in the spring of the year. The old breeding animals when finally killed furnish good meat, and the pelts are used for making carriage robes, rugs and fur trimmings for children's garments.

Recently golf clubs of prominence have purchased Angora goats to turn loose on their links. Besides lending beauty to the landscape, they improve the quality of the links by packing the sward more firmly and keeping down weeds and bushes. Nearly all of the large country estates contain at least a few of the goats for ornamental purposes, while their value as farm animals is unquestioned.

The author is indebted to the proprietor of Ward's Angora Ranch, Livingston Manor, N. Y., for courtesies extended in the preparation of this article.

The Lightning Rod

FOR four years past a Lightning Research Committee, organized by the Royal Institute of British Architects and the Surveyors' Institution of London, have been conducting a series of investigations into the use and value of lightning rods. The recently published report sums up and recapitulates the results of much new study on this important subject, the practical suggestions of which are as follows:

1. Two main lightning rods, one on each side, should be provided extending from the top of each tower, spire or high chimney stack by the most direct course to the earth.

2. Horizontal conductors should connect all the vertical rods, (a) along the ridge, or any other suitable position on the roof; (b) at or near the ground line.

3. The upper horizontal conductor should be fitted with aigrettes or points at intervals of twenty or thirty feet.

4. Short vertical rods should be erected along minor pinnacles and connected with the upper horizontal conductor.

5. All roof metals, such as finials, ridging, rain-water and ventilating pipes, metal cowls, lead flashing gutters, etc., should be connected to the horizontal conductors.

6. All large masses of metal in the building should be connected to earth either directly or by means of the lower horizontal conductor.

7. Where roofs are partially or wholly metal-lined they should be connected to earth by means of vertical rods at several points.

8. Gas pipes should be kept as far away as possible from the positions occupied by lightning conductors, and as an additional protection the service mains to the gas meter should be metallically connected with house services leading from the meter.

In discussing this report the Electrical Review raises the question as to whether lightning conductors are a source of danger or not. A building " protected " by a lightning conductor, it says, is probably more often struck by lightning than it would be without it; and unless the conductor offers a sufficiently clear run direct to earth, there is the danger of side-flash, when a portion of the discharge will pass through the masonry or metal-work of the building to earth. Experience appears to teach that the safest way to protect a building from lightning is to keep the conductor quite clear of the building, that is to say, sufficiently far from it absolutely to prevent side-flash. If this be so, the best way to treat an isolated building is by an isolated mast.

Luther Burbank and Plant Breeding

By Enos Brown

TO LUTHER BURBANK has been granted the knowledge, supreme beyond other men, of the susceptibility of plants to vary under the influence of new environments, delicate manipulation and intelligent direction. Variations in plants, in color, size, fragrance or form, have been observed by biologists from the first, but the phenomenon of change was regarded as a simple order of nature and an additional instance of nature's lavish endowments. That plants could be made to respond to a dominant will, and that the character, appearance or habits of a plant might be controlled or altered, and that new ones might be created out of a combination of others, was never dreamed of or imagined, but all these strange things have been demonstrated as facts in the later years of the present generation.

The theory of plant evolution has, in a brief period, been even more conclusively established than the most enthusiastic disciple of Darwin ever conceived to be possible. That the scene of these superlatively impressive manifestations of the power of the mind over the natural impulses of plant life should have been developed in the farthest West is something to astonish the most credulous.

It is only ten years since Mr. Burbank began those experiments which have lately culminated. For thirty years a resident of Santa Rosa, Sonoma County, he was perfectly acquainted with all the conditions of climate and soil which distinguished this portion of California. In ages past a lake spread its broad area over this valley, depositing in time a rich alluvial soil of great depth. Frosts are of rare occurrence, and plant growth, no matter how delicate, is never arrested from this cause. In no region is there a combination of circumstances more favorable for fullest development or successful experimentation.

Bed of Cactus Seedlings, Thornless, Showing Few Reversions

The marvelous results attained are due to nothing but rational methods, insight, close observation and a highly developed knowledge of plant instinct, altogether directed by scientific attainments of the highest order and with a definite object always in view.

It has been established that wild flowers are stubborn in maintaining their original form. In a bed of one thousand, or even ten thousand blossoms, for that matter, there may be but one exhibiting variation. The change may be upward or downward, an improvement or otherwise. It makes no difference to the plant breeder. One plant susceptible to change

Hybridized Baldwin Apple, One-Half Yellow, One-Half Red

A Bed of Fragrant Verbenas

has been found, and is selected for further experiment. All the remaining plants, the unchangeables, are uprooted and destroyed. Upon the one the efforts of the breeder are centered. The faculty to discern a slight variation in a single plant is an essential, the foundation upon which after-results are obtained. Let the lover of plants endeavor to exercise this faculty and pick out of a bed of a thousand flowers the one that differs from all others in color, form or fragrance, and then will be understood the fine quality of that gift which enables Mr. Burbank to glance over a bed of flowers and instantly discern the one variation for which he is seeking. Minute attention to detail is one secret of the success attained. Sterilizations extend not only to the soil in which seeds are planted, but to the fertilizer with which the soil is enriched. Hostile germs are destroyed by boiling the soil. The boxes are sterilized by a solution of sulphate of copper. Mr. Burbank has correspondents in every part of the world where the science of botany is understood or a botanist penetrates. Scientific associations everywhere are his coadjutors. Persons in every zone forward to him new types. For him to look at a seed is to identify it. The environments and conditions of growth are understood as soon as the home latitude of the plant is ascertained. Identical environments of a plant may be imitated, and later, by graft or hybridizing, new vigor, which means greater power of resistance to lower temperatures, may be imparted. A conspicuous instance of this fact is the yellow calla, which is naturally confined to a limited area in the subtropical regions of South Africa. At home it is an extremely fragile plant. By hybridizing and crossing with the ordinary white calla of the United States a deep yellow flower has been evolved as hardy as the native variety. The first cross-

Cactus Ready for the Hybridizer

Sweet Vernal Grass, Showing Great Variation in Size of Plants Grown from the Seed of One Plant

The Two Central Raspberries were Produced from the Two Varieties at the Ends by Crossing and Selection

An Amarylis One-Quarter Natural Size

ing resulted in light and dark yellow flowers. Subsequent crossings yielded flowers as deep in color as the original. It has taken years to develop these qualities in its new environments, but there is no reason why the yellow should not be cultivated in temperatures where the common white now flourishes.

To the residents of New and Old Mexico, Arizona, Texas and Central America the qualities, amiable and otherwise, which pre-eminently distinguish the prickly pear need not be enlarged upon. In the hot-houses of the North small specimens of the plant are cherished as conclusive exhibitions of the eccentricities of nature. In its home this cactus grows to the dimensions of trees and is used as fences to protect the domicile against the irruptions of any animal, wild or domestic. Its sharp thorns are impregnable to assault. Divested of its spines the prickly pear as a food plant has a value equaling one-half that of alfalfa. It propagates itself with little moisture. Cattle eat it with avidity, but the spines, introduced into the intestines, cause death. A more conclusive test of the practical value of the theories of Mr. Burbank, then, in an endeavor to divest the prickly pear of its thorns, could not be imagined. This he undertook to do, and succeeded.

In certain parts of Central America there grows a species of prickly pear which has no spines or spikes, the only thorn with which the plant is endowed being the spicules found within the leaves. A plant of this variety was set out in the experimental grounds and crossed or hybridized with five Northern species, producing a type in which the spines were almost eliminated. Continued crossings produced in the fifth or sixth generations which was completely thornless. Succeeding efforts resulted in a cactus in which every evidence of even a spicule had vanished. The new plant is hardy and vigorous growth. One plant in the grounds is three years old and stands eight feet high, covering a space perhaps five feet square. Upon it there are one hundred and seventy leaves, and the whole plant weighs nine hundred pounds. The fruit is of delicious flavor, somewhat like the pineapple, only more delicate. The deserts of the South may be clothed in the spineless cactus at no late day. Its value would be incalculable.

A Thornless Cactus Not Yet Deprived of its Spicules

The magnificent crimson poppy, which bears a flower fully eighteen inches in circumference, is a product of hybridizing the opium with the Oriental. The first generation produced a flower having a narrow crimson streak. In this all the pistils excepting those which were crimson were cut off or amputated. These seeds were, in due time, planted, and a flower nearly solid crimson bloomed from the stem. Successive efforts eliminated every other color but the one desired. It is the glory of the field; a whole garden in itself. It took three or four years and many generations to create, but the great crimson poppy is now a permanent addition to the ornaments of the garden. As showing the results of continued crossings, in a bed containing hundreds of thousands of leaves there could be seen no two which were alike.

The California poppy, Eschscholtzia, naturally rich, deep yellow in color, by following up a rare specimen in which only a vein of crimson appeared, has developed a new type which is all crimson.

The fragrant verbena is a product of selection and crossing. One plant was discovered in which a trait of ancestry revived and exhibited itself in one specimen, which was discovered by the plant breeder and its fragrance revived.

The amarylis has been bred into a new plant, colossal in size and gorgeous in color. Its size has been increased to four times greater than the original, and measures from eight to ten inches across.

A wild white blackberry crossed with the Lawton produces a much clearer white, and is infinitely more productive than the Lawton and of finer flavor.

The common daisy of the North has, by hybridizing and selection, developed into a flower four and five times as large as the original and many times more beautiful. The variations of the new plant are endless.

The latest wonder to be established at the experimental farm are two new types of the black walnut tree, and named the Paradox and Royal. The first is a crossing of the common English walnut with the California, the latter between the Eastern and the California. In front of the Burbank home there are trees of the Paradox, not yet fourteen years

Extreme Form of Blackberry Leaves Produced by Hybridization of Two Distinct Species

of age, which measure two feet and over in diameter at a height of three feet above the ground. It is claimed that these trees are by twenty-five to fifty per cent. more rapid growers than any known. The quality of the wood for finishing is said to be very superior, and takes on a beautiful finish.

No one expects a plant to flourish without proper nourishment. The plant responds quickly to genial culture. In color combination a new type is found or else the greater peculiarities of one of the parents. Color is certain waves of light. Soils known as alkali produce colors in which the red is predominant. In soils with acid combination blue is most conspicuous.

Permanence of the new types is assured. A gain in color, form, vigor, size, fragrance or quality, in the direction of variation, once secured, is as liable to endure as new varieties of fruits, berries and flowers which have been established for generations.

To enumerate all the variations upon established types built up under Mr. Burbank's methods would be impossible. There is no end of them. Upon no species of plant life, be it flower, berry or fruit, has crossing and hybridizing failed to produce the most wonderful changes. When a change is noted the avenue is opened for variations in every direction. Time is the greatest element in all plant modifications. It may take years to develop to the full realization of the hopes of the plant breeder. Any property, color, shape, size or fragrance may remain dormant, to be brought out under the influence of improved cultivation or the stimulation of some influence imparted by the hybridizing process. The best or the worst qualities of a plant may be confined in a single one. The expert plant breeder will combine many traits in order to produce the type he is searching for.

The element of precisions enters into all of Mr. Burbank's operations. The depth to which seeds should be planted, nature of soil required, the proper temperature, exposure, shady or otherwise, moist or dry—all of these particulars are observed and recorded with infinite care. When the plants appear a careful selection is made of the most promising. These selected plants are never lost sight of. Then preferences, for their mute language is understood, are humored. If color is the object sought, every other tendency is lost sight of but that; so for size, form or fragrance. Later a combination of all these qualities may be merged into the one. Cultivation will not produce new type, but crossing and hybridizing most always will.

Daisy Shasta, One-Third Natural Size

Pollination is effective only at the moment selected by the plant itself. To some plants the time is when the bees appear. The evening primrose selects the time when the night moths are abroad. Pollen is sometimes applied with the finger; a camel's-hair brush is used in the case of certain plants. Pollen is gathered early in the morning. Sometimes buds are picked and the pollen taken as they ripen and open. The plants thus treated are tagged and watched and their character and habits recorded. It may be years before the results of all this care and detail are known to a certainty.

Mr. Burbank expresses himself as follows regarding the vast possibilities of plant breeding. They can hardly be estimated.

"It would not be difficult for one man to breed a new rye, wheat, barley, oats or rice which would produce one grain more to each head, or a corn to produce an extra kernel to each ear, another potato to each plant, or an apple, plum, orange or nut to each tree.

"What would be the result? Nature would produce annually, without extra cost or effort, 5,200,000 extra bushels of corn, 15,000,000 extra bushels of wheat, 20,000,000 extra bushels of oats, 1,500,000 bushels more of barley and 21,000,000 extra bushels of potatoes. Not for one year only, but as a permanent legacy for all future generations."

Truly a wonderful outlook.

The Nursery in America

By Walter A. Dyer

THE scientists have been making some interesting experiments of late to determine the effect of various colors on the human nervous system. If their enthusiasm has carried their theories too far, they have at least shown that there is an element of truth in the idea. In its broader aspect, no one will seriously question the theory that bright, harmonious colors in one's surroundings tend to greater happiness and a healthier nervous condition than the more somber hues.

Let us, then, take so much for granted, and also the statement that children are fully as sensitive to their surroundings as adults. A learned paper might easily be written to prove that a child's health and disposition may depend, to a remarkable degree, upon his surroundings, whether they be bright and cheerful or gloomy and uninteresting.

The study of pedagogy has done much to improve the minds, bodies and characters of American children in school. But how about the home conditions? Until recently very little was ever done to give the child a room in which he could grow up healthy and happy and endowed with a love for the clean and the beautiful. Even to-day there are only a few real nurseries in this country worth writing about. Houses in which the decorations of parlor, library, dining-room and chamber are all that could be desired have no place in them for a nursery worthy of the name.

The day is fast approaching when the nursery will receive as much attention as the other rooms in the American house, but at present we must look to Europe for our models. Of course, there are children's rooms, but they are, for the most part, meaningless in their decorations. A crib, a few pictures, a little chair or two and the toys are about all that constitute the furnishings of most of them.

England and Germany are countries of homes, and it is in these countries that we find the best examples of the modern nursery. Some of the best designers and decorators in

these countries, as well as manufacturers, have been giving their best thought to this room. Perhaps it would be interesting to mention one or two of them.

There is a Scandinavian artist, Karl Larsson by name, who has, of late years, been turning his talents into the channel of home decoration. The keynote of his style is variety and individuality. He scorns to follow fixed rules, and decorates his walls in panels and sections, employing a great variety of patterns, though the colorings always harmonize and the patterns in a single room always show a certain kinship of type. Like the Japanese, he decorates his dark jogs and corners in lighter tones than those employed in the spaces on which the full light of the windows falls. The panels of his doors are decorated fancifully, and over doors and windows he likes to arrange a little special decoration, breaking the monotony of the frieze.

None of Larsson's rooms are more delightful than his nurseries. He seems to know what the little people like, and he varies his dainty floral patterns with an occasional figure of droll grotesqueness or fairy grace. And his color sense is superb. The children get as much of his skill in harmony and blending as the grown-ups.

In England, where the decorative profession is of great importance, there are several well-known firms which have been doing notable things in the nursery. One of the foremost, Waring & Gillow, of London, exhibited at the St. Louis Exposition last year, together with other rooms, a fully decorated and furnished English nursery. It was full of individuality and artistic charm, and should have made a lasting impression on the minds of the American parents who saw it.

In England, child-loving artists have been giving their attention to wall paper designing. Everybody knows Kate Greenaway's picture books. Her wall papers are no less highly prized in England. Walter Crane is another artist—the last survivor of the pre-Raphaelite school, by the way—who does not disdain to work for the little ones. He, too, is better known in this country for his charming illustrations of fairy tales and Christmas books, but he has employed the same dainty grace in his wall paper designs. And now Cecil Alden is drawing some of the most fascinating panels and friezes that were ever designed for children.

Fortunately the work of these English artists can be obtained through the importers, and there are plenty of good English nursery wall papers now on the market. Our domestic designers and manufacturers are also going into it gradually, and there will be plenty of good, low-priced nursery wall papers to be had as soon as the demand increases.

But this is America and the present, and we must consider what can be done to-day in fitting up a nursery with the materials at hand. It is a room which is bound to become popular soon, and it is high time that we gave it a little thought.

In general, the furniture should be strong but not ugly, for we must never forget that no one is more open to the subtle influences of the beautiful than a child. The room should be bright and the colors pleasing. The walls should be given careful attention, and also the draperies and coverings. Cretonnes and cotton prints can be obtained, bright with flowers and fantastic figures especially designed for the nursery. A figured chintz or flowered muslin is better for window curtains and draperies than white lace or tapestries. Variety and brightness and pictorial interest are what the child loves.

The wall papers may be floral, or Mother Goose, animal and kindred subjects, or both. The pictures should be selected with the same care, and may be either simply amusing or embody some educational idea. Historical and geographical subjects need not be uninteresting simply because they teach something. But we should never permit poor art or poor taste to creep in, merely because the child won't know the difference. He doesn't know, but he feels.

Perhaps it will prove helpful to some reader if we describe a sort of model nursery that will not cost a fortune. We will assume that it is a room of fair size, with two or more windows; the nursery must be well lighted. If it is used as a bedroom as well as a playroom, of course there are the beds or cribs. If the windows can be darkened with an extra set of green shades it will often help to keep the baby asleep in the morning until his elders want to get up.

We can use a carpet on the floor, though bright rugs are better; they are so much more easily cleaned, and the nursery must be kept clean to be healthful. Window draperies are not a necessity, but something bright and pretty, draped back, adds to the general effect.

At each of the windows, or part way around the room, we will build a window seat, not too high, but high enough so that little faces can look out, and broad enough so that little legs can be stretched out comfortably. We will make it simple and won't try to give it such a high polish that we shall have to make annoying rules to prevent scratching.

For the rest of the furniture we will buy whatever we can that is small enough and strong and pretty. Willow rockers are plenty, and there is one manufacturing firm in New York which makes a line of little chairs and tables and desks, in the mission style, strong and dark colored, and just the right size. We'll buy some of those, if we can find them.

Now for the walls. We'll find out how far up little fingers can reach, and just above that point we'll run a narrow shelf around the room. On this we can put ornaments and bric-à-brac, of the sort that children love, out of harm's way. By all means get one of those old-fashioned barometers, with the quaint man and woman in the cottage door.

Below the shelf or plate-rail we will use something very durable and not easily soiled. Suppose we use a dark green burlap. We can add to the durability and decorative effect by paneling it off with flat, vertical cleats a couple of feet apart. All the woodwork should be stained a dark color, so that we won't have to be continually on the lookout for finger-marks. If we use the black or brown mission furniture, the woodwork stained to match will produce a most satisfactory result.

Now above the shelf we must bring in our color, and we have placed the shelf as low as possible in order to get in as much color as possible. Never be afraid of using plenty of color; discord is the only thing to be avoided. Just above the shelf we will use a Mother Goose or an animal frieze. Friezes are generally hung at the top of the wall, to be sure, and your paperhanger will doubtless insist on the prescribed method, but there is no law to prevent our hanging this one nearer the level of bright eyes, and if we try it I think we'll be rather pleased with the result than otherwise.

Above the frieze we'll use a floral wall paper in natural colorings. We'll taboo blue roses and pink violets. If we haven't many pictures, we can use quite a gaudy floral. Or we can use something quiet and dainty, and depend more upon the hanging pictures or poster panels. There's a good series of such panels for the nursery on the market called, "Morning," "Noon" and "Night." Wherever there are many pictures in a room, it's always well to use a quiet paper. Too pronounced a pattern is always fighting with the pictures for supremacy.

Now, then, we have a room that serves a number of practical ends, and which Gerald and Irene will go into ecstacies over when we let them in and tell them it's theirs. Won't it be worth the trouble and expense?

We shall undoubtedly find many ways in which to improve on this pattern, but it will do for a working basis. Some of us, though of modest means, must make the experiment.

Principles of Home Decoration

II—Concerning Halls

By Joy Wheeler Dow

IF WE were speaking of the halls of conventional city houses on conventional city lots or the halls of apartment houses, I do not know that anything need be said further than to keep them as little furnished and as unobtrusive by decoration as possible. Superficial embellishment of these halls only tends to advertise their architectural deformity, which no decoration can cover up; for, architecturally, they are not halls at all—"passages" is the better word. There used to be some old-fashioned city houses which had main passages so amplified by breadth, and by placing the staircase in a staircase-hall toward the rear, sometimes, as in the older parts of Philadelphia, leading to a mezzanine dining-room in a back building, as to deserve being dignified as halls. But in this paper I am presupposing the most important institution in the plan of an Anglo-Saxon dwelling-house, which, if not always the principal room, is always the axis morally, whether mathematically or not, of the house scheme. And this, to plagiarize a catchy refrain from "The Runaway Girl," "I think is quite the kind of hall we care about."

1—The Hall of Hoghton Tower, Lancashire, England, Showing Vast Size and Height

Now, every good American with the least ambition looks forward to some day when he shall have a country seat in which there is pre-eminently a hall, not necessarily so splendid an apartment nor inclosing the vast cubic space inclosed by the hall at Hoghton, in Lancashire, England, but a hall with every inch as much home significance. That is the thing! And I only wish that the wealth of the United States was such, and economic differences so nicely adjusted, as to permit every individual citizen whose free education has created and cultivated the want, to acquire equally good architecture for his dwelling place.

To most of my readers this single object lesson of a hall will be sufficient without a word relative to its merits in detail; but to give my illustration still greater power and influence I can do no better than to follow the good illustration by one which has been marred by overcrowding.

In plate No. 2 is shown the main hall of an imposing mansion not far from New York City. It has been enriched with every decorative device that wealth could suggest. Still, the effect produced is not altogether satisfactory. The architect is largely to blame for the results produced, as he has too much duplicated the use of the arch, until the eye is wearied with the effect and the observer is reminded of the endless rows of arches in the temple at Cordova, fascinating though that arrangement may be for a Moorish mosque. It will be observed that the three Greek orders have been indulged in on the supporting columns. It would seem less confusing to have adhered to either the Corinthian or Ionic order and to have left the other forms alone. Then, too, the winding of scarves about

2—Hall Marred by Over-Profusion

3—A Very Delightful Hall in an American Dwelling House

4—Avoid Piano Lamps as a Means of Decoration

the balustrades of the gallery is a questionable expedient. The hanging of embroideries, tapestries or vestments from the galleries of vast halls is often resorted to by the best architects and decorators, but this method of decoration should be used with conservatism.

But let us rest our eyes and relax the tension of our nerves by a return to the hall in Lancashire. "The poor taste of the rich" is not proverbial in America, however, more than is the good taste of the rich proverbial in England, only English Country Life, from which our illustration is taken, looks out not to encourage the poor taste by publishing it, for the influence of pictures is so far-reaching as to make or unmake a nation.

A very delightful hall in an American dwelling house is presented in No. 3, demonstrating the power of a moderate amount of money judiciously employed. There are no harsh contrasts, no scarves, no bric-à-brac, no superfluous ornamentation. Compare the lines of the chair in the foreground with those of the Empire chair in No. 2. The Empire furniture is a very unaccommodating and trying style, which the decorators, for obvious reasons, do not tell you. Even when its lines are good it should be used sparingly and with great care, but when its lines are ugly, as in the chair in No. 2, you had better confine your Napoleonic enthusiasm to his biographies. Every hall in American Renaissance should have a cornice and wainscot after the manner of what we see in

5—One of the Most Dignified of its Class in America

6—The Stuffed Owl upon the Mantel-Shelf is Perhaps the Best Feature

7—Strenuous Simplicity

No. 3. I can not recommend finishing more than the top member of the stair rails in mahogany. The mahogany rail in No. 3 is a bit heavy, but we shall not be hypercritical upon a minor detail when that detail is the only disappointing one.

Much less agreeable to look at is the American hallway we have exemplified in No. 4. There are, happily, no scarves, as in No. 2, but there are two befrilled piano lamps and other extremely mediocre intrusion both in furniture and architectural detail. Avoid piano lamps, as you should all household impedimenta.

Equally as expensive as No. 1, and quite as carefully thought out, is the Jacobean hall, also belonging to an American estate. (See No. 5.) I believe this hall to be the most beautiful hall of its class in America. At Blickling Hall, in Norfolkshire, there is a very similar gallery, but it is not so successful either in its proportions or detail as this hall in America.

A typical average hall of the modern American dwelling is presented in No. 6. The stuffed owl upon the mantel-shelf is, perhaps, its best feature, because the combination gas and electric chandelier looks cheap and tawdry, and were it lighted would burn up any percentage of historic atmosphere there might be in the place. The chimney-piece is a regular hand-me-down, catalogue mantel, no doubt, stained, when the rule is never to stain anything unless it be shingles or timbers on the outside walls of a house. There might be a note of hope in the Governor Bradford armchair, but even this piece of furniture is not loyal to its professed antecedents, for it has not their good lines. The lines have been narrowed and pinched. The legs and arms of the other chair are in better design, but these are spoiled again by the Sixth-avenue-sidewalk back. Then, of course, the center table has neither family nor ancestor.

8—An Interior in Kent, England, in which Simplicity is Likewise Strenuous Simplicity

No. 8 represents an interior in Kent, in England. I wish to give the reader credit for sufficient knowledge of good interior architecture, not to enumerate and point out the particular excellences herein presented. It is the air of simplicity without being strenuous simplicity; for strenuous simplicity, however commendable it may be in public life, is not to be commended for the home. The hall shown in No. 7 is a crowning example of strenuous simplicity. The homelike effect, however, has been sacrificed by a severity that is almost extreme in its artificiality.

How to Make a Camp in the Woods

By A. Russell Bond

AS THE hot south wind smothers us and the glare of naked stone buildings and treeless asphalt streets blinds us many flee from the immediate discomforts of the busy city to the summer resort, seeking to avoid the odium of one type of civilization by entering the civilization of another type scarcely less wearing on mind and body. But the wise few who heed the forest call steal back to the old forgotten nature homestead, there to coax back some of the strength and vigor that blessed the childhood days of mankind.

Curious lodgings some of them find, mere brush lean-tos; primitive tents with saplings for ridge poles, and hemlock boughs for walls, or rough bark shelters in which the ridge pole supports rafters covered with strips of bark. Some campers bring their shelter with them in the shape of a sleeping bag, a light silk tent, or a large canvas-wall tent, but this savors too much of civilization, and is an insult to the resources of the forest. The true worshipper of nature will scorn to use any material in his home, whether temporary or permanent, that can not be hewn from the forest itself. Of course, when a man is off on a hunting expedition or a tour of exploration, he must be satisfied with the temporary shacks of brush or bark, hastily erected in the late afternoon, but the ideal abode in the forest is the log cabin. The log cabin is capable of as much variation in form and design as any modern cottage, but since it is the object of the forest lover to get away from all suggestion of town and city life, he will prefer the humble hut of the frontiersman to the twelve-room, two-story-and-attic log dwelling that in the Adirondacks goes by the name of camp.

The building of a log cabin is a very simple task. An expert axman will probably construct it in a couple of days, and even a novice could do it in a short time, the only tools required being a sharp ax, a saw and a hunter's knife. First the site must be chosen on high ground; if possible, on a knoll where a good view may be had of some of the surrounding country. At any rate, the cabin must not be located near swampy or boggy ground. However, plenty of good, fresh water is absolutely essential, and before finally selecting the location of the cabin one should make sure that there is a spring or a clear stream close at hand. The site chosen, the underbrush should be cleared, and the plan of the cabin should be staked out. A large cabin would require a substantial foundation—a deep trench filled with stones or a row of poles sunk into the ground; but for the average ground-floor cabin it will be sufficient to sink posts at the corners to prevent settling. If the ground is fairly hard large stones may be used instead. The logs may now be cut. They should, of course, be as straight and as nearly uniform in diameter as possible. To be sure, the logs must project beyond the corners of the cabin, and for this at least one foot should be allowed at each end of the building. It will make the log house more durable, though it would rob it of much of its charm to peel the bark from the logs. This can be readily done in the early summer months, and the bark can be flattened out and used later for roofing purposes. The bare logs are soon weathered to a soft gray tint which is not unpleasing to the eye, and which blends with the coloring of the surrounding forest. The chief objection to leaving the bark on the logs is that it offers a home for all breeds of ants and wood-boring insects. However, if, despite these objections, it is desired to keep the logs in their natural clothing of bark, it will be found preferable to build a cabin in the latter months of the summer, for then the bark will adhere better to the wood.

A Canvas-Wall Tent among the Big Trees of California

First choose two of the largest logs and lay them at the front and the rear of the cabin. They should be flattened

A Crude Bark Lean-To Shelter

along the bottom, so that they will rest squarely on the foundation. Notches should be cut in each log about a foot from each end. Then a pair of logs should be rolled across them for the beginning of the side walls. The side logs should be rolled to such a position that another half turn would drop them into the notches in the logs below, but before giving them this final half turn they should be notched on the upper side, so that when they drop into position these notches will fit over the notches of the lower logs. After these side logs are in place they are notched at the ends to receive the next pair of front and back logs, and so the work progresses until the walls are carried up to their full height. The notches are all cut to a depth of about one-quarter of the diameter of the log, and as the logs are notched on both the upper and the lower sides, it will be evident that there will be no gaps between the logs on the side, except such as are due to irregularity of shape. When building up the walls, it will be found best in practice to lay the logs with their butt ends alternately at opposite corners of the building. It will be very difficult to find logs of a uniform diameter throughout, and by thus alternating the positions of the large ends the walls will rise evenly all around. Some cabins are built with the logs flattened at the ends, but they are not quite as strong as when the logs are notched, because the only thing that prevents the walls from being pushed outward is the friction due to the weight of the timber. There are, besides these, many other ways of joining the logs at the corners, but most of them are rather difficult for an inexperienced man to practise.

The method of putting in a doorway or window is apt to trouble the uninitiated. When the walls have been carried up to the height of the desired opening a piece corresponding in length with the width of the opening is sawed out of the top log. This leaves a space large enough for inserting a saw so that the remaining logs can be cut when desired. The sawed log may be temporarily stayed by a cleat while the walls are being built on up to their full height. When the top of the wall is reached the next two logs are notched in at a short distance back from the edge of the wall. These are connected by cross logs as usual. And then the next pair are laid still further in from the edge, and so on until the final central log is placed in position and serves as the ridge of the roof. Light poles may be laid across these roof beams to serve as rafters. The rafters may be held in place by a light log laid across them at their lower ends, as shown in one of the illustrations. The rafters are covered with pieces of bark, which are made to overlap each other, like shingles. In one of the cabins illustrated a rather novel tile effect is produced by using for the rafters logs split in two with the central core removed. These trough-shaped logs are laid in place in a regular tile fashion, so that rain will be shed from the round of one into the troughs of the two at each side. At the ridge the joints are covered by an inverted trough-shaped log. For further protection the logs are covered with bark. When the roof has been laid the openings for the doors and windows may be sawed out after first nailing a strip of wood to the logs along each side of the proposed openings to bind them in place and prevent them from buckling out of line. These strips, however, are only temporary. A permanent binding is provided by nailing jambs against the sawed ends of the logs, and the frame of the door is then completed by adding a lintel and sill. A rough door may now be constructed of wood slabs or boards battened together. For a hinge two pins may be used nailed

A Useful Device in Roof Construction, Showing How the Logs have been Hollowed Out and Laid in the Manner of a Tile Roof

Some Bring their Shelter with them in the Form of a Sleeping Bag

respectively at the top and bottom of the door at one end, and fitting loosely into holes in the lintel and sill of the door frame. Glass for the windows is somewhat of a luxury. A primitive substitute is oiled paper, which admits plenty of light and also prevents rain from beating in. The chinks between the logs of the cabin can be closed with pieces of wood, rolls of bark or a plastering of mud. A flooring of logs split into slabs will be found an acceptable luxury, though it is not necessary on well drained ground.

No log cabin is complete without an open fireplace. A stove is very much out of keeping with a primitive dwelling. Its dead black walls lend no poetry to the surroundings. A large open fireplace should, by all means, be constructed. For this purpose an opening should be cut in the rear of the building and framed in the same way as a door or window. If stones are plentiful, a chimney of rustic masonry can be built up on the outside, using mud or clay for mortar. With such a chimney it will be found best to use only flat stone, because the binding power of the mud is not very strong, and where the fire opening comes in contact with the logs of the cabin a thick lining of clay should be applied. Where stones are not available, the frame of the chimney can be constructed of logs and sticks, notched and built up like the logs of the main building. A lining of clay at least twelve inches thick must cover the wood. The chimney should be carried well above the gable of the cabin to insure a good draft in any direction of the wind. The fireplace may be raised a little above the floor of the cabin and framed in with large logs well plastered with clay.

For a bunk a pair of logs are laid parallel on the floor, and the space between them filled with hemlock or balsam boughs, or the latter may be supported on stout sticks laid across the logs. But of the making of camp furniture there is no end. Rustic stools, chairs, benches, settees, tables, cupboards, desks, chests, can all be added as fast as one's skill and ingenuity permits. In fact, it is the fitting up of the cabin out of the limited resources at hand that adds so much to the charm of living in the frontiersman's abode. The use of bark in a hundred and one different ways, even the building of a camp fire in the open, and the many other tricks of the woodsman, which can be acquired only by actual experience, will be found a most fascinating study—a study that carries one far from the sphere of business cares and anxiety. It was only a short time ago that the free life of the forest was considered a species of savagery, a relic of the brute instinct, betokening an animal origin, but in these days of feverish business activity, when every day emphasizes the need of frequent and thorough rest, it is no longer considered vulgar or barbarous to seek recreation at the old homestead where man at his creation gained strength and vigor.

The Use of Boards and Shingles Greatly Simplifies the Work of Construction, But They Are Not Always to Be Obtained

We are indebted to Mr. Henry D. Cochrane for several of the photographs published herewith.

Science for the Home

Ventilation for the House

THE last word on ventilation will probably never be said while there are people to live in houses. And yet, important as ventilation is for the house, it is rather its relation to public buildings, to places of assembly, such as churches, schools, theaters and other places of amusement, to factories and workshops—in fine, to any place where large numbers of people are crowded together—that is considered, than its direct relationship to the house, or the very important part ventilation must have in the dwelling; in no place is pure air more urgently needed than in the home.

The breathing of impure air is precisely identical, so far as its effect is concerned, upon the human body as the drinking of impure water or the eating of impure food. Both air and water are foods, foods of such abundance in supply and so readily obtained that little thought is given to their getting. This is especially true of air, which is the single life-sustaining element obtained without cost or labor, and a general indifference exists as to its origin and a quite profound lack of knowledge as to its contents and qualities.

One of the newest of the New York hotels recently installed an elaborate and intricate air-filtering plant, by which every pound of air brought into the building was thoroughly filtered and cleaned before reaching the rooms. It was not a new idea, but it had not before been applied to a building of this sort, and perhaps never before on so large a scale. The results obtained were little short of startling, a very considerable quantity of dust, dirt and ashes being obtained each day.

In the present state of the ventilating art it is hardly possible that air filters can come into general use as regular articles of household equipment, valuable and servicable as such a device would be; but the practical demonstration that the air of New York—and in an excellent locality, it should be noted—is so foul as to yield appreciable and even considerable amounts of refuse is an object lesson of the utmost importance.

Helps to Home Building

The Arts and the House

A VASE of porcelain, a piece of Japanese bronze, a rare silk rug, a cherished writing table that belonged to some remote ancestor, may at first sight seem slight material on which to build up a household interior; yet, as a matter of fact, each one of these things could very well be taken as the starting point on which very beautiful rooms may be arranged. Comfort is, no doubt, the first quality to be considered in a room; but it must also be beautiful, or it will fall far short of being all that it might be and all that it ought to be.

As everything within a room helps in the finality of effect, it is apparent that the ornaments and decorative objects have a part to perform that is quite as real, and sometimes quite as important, as the larger articles of furniture without which every room would be unusable. In a popular sense, no doubt, the word ornament implies something that is not useful, something we can get along without, something that is not needed, something that is purely unnecessary. In a literal sense, and from the standpoint of the home maker, nothing inside the house is without use, nothing of so slight a value that its presence is simply tolerated with an affected disregard of its presence.

Ornaments, however, have their use, and a very real use, in the house, and that is to add to the beauty of the interior. It is an unfortunate chance that gives to most new householders a very miscellaneous collection of ornaments acquired as wedding gifts. Well meant as many of these offerings are, they are chosen, in most cases, without the slightest regard to their future location or utilization. Terrible as it is to think of many of these objects, it is much more terrible to have them. But the outlook is by no means so dark as it once was. The standards of good taste have risen markedly in America in the last twenty-five years, and the movement is still upward. The opportunities to purchase ugly ornaments—as if an ornament could, by its very nature, be ugly! —are no longer so numerous as formerly. Better things are made and more of them. The individual maker, who is often an artist in a quite true sense, has entered the field of commerce, and many beautiful and artistic ornamental objects can now be purchased almost everywhere.

It is to be hoped that gaudiness has had its day, although, without a widespread artistic culture that is true culture, it would be rash to prophesy as to what may happen in the world of art. Just now we are passing through an epoch of novelty, in which the cry for something new is very loud and penetrating. It is a painful period, for it introduces, as a measure of art, a standard which is not only not artistic, but which has nothing to do with art—the standard of newness. It is a quite natural consequence that many strange, weird, fearful things are manufactured and sold under the disguise of art, simply because nothing like them was ever seen before. It is a sad commentary on our art culture that several successful industries have grown up around such a foolish notion.

If the young bride starts in with a more artistic group of gifts than her mother began with, it is chiefly more due to the fact that there are better things to buy than because of a wider artistic culture among her acquaintanceship. But even this is something to be thankful for, and were it not that these offerings are selected by many persons, and entirely without regard to their final disposition, a very good beginning might be made in household ornamentation.

From the householder's point of view ornaments may be grouped into two classes: those which are given and those which are acquired. With the former he has nothing to do; he is the helpless victim who must take what he gets and make the best use he can of it. The difficulties of the problem are not lessened by the fact that every donor, even of the most impossible gifts, expects his offering to be valued and appreciated, and, if not actually given the place of honor in the home, at least displayed in a conspicuous place, where it can be seen by all. The acquired ornaments belong to quite a different class, and constitute objects purchased by the householder for his own particular delight and joy, and because they fit into some definite scheme of interior decoration; are, in short, necessary to the artistic effect of certain rooms.

And they are more than that, for they are manifestations of personal taste, and show, in a thoroughly unmistakable way, how far one has progressed in personal art culture. Perhaps this aspect of ornaments is seldom thought of, and perhaps it is of no special value; for the whole home is a work of art—or it should be—and the home that contains ugly furniture and unsatisfactory curtains will not be redeemed by a beautiful vase or an exquisitely turned candlestick, admirable as each may be.

The lesser arts are entering the home more and more each day. The personal note of the individual craftsman—the genuine art worker—is now given to many objects which, not long since, could only be obtained in factory-made form or not at all. But only a beginning has been made. The department store is still with us, and vulgar art flourishes amazingly within it. The prices of individual or exclusive designs, as they are sometimes called, is high, for the labor expended in their production is costly and the markets are somewhat restricted. One may rightly hesitate at paying four dollars for a single candlestick, but the man or woman who debates whether the candlestick shall cost twenty-five cents or four dollars is hopelessly lost.

Glass, pottery and metal, to name the materials of which ornamental objects are chiefly made, are much more used in the house than formerly. And not only are they more used, but they are used in a better way, with more intelligence and in more artistic forms. It is a good sign of the broadening influence of art that this is so. And it is a good sign that many people now appreciate and treasure such objects that, not long since, scarcely knew them by name.

With this increased use comes greater responsibility. It is not sufficient simply to have objects; one must know how to use them and get the best from them. The arrangement of ornamental objects is quite as important as their possession, perhaps more so; for the most beautiful object loses much of its value if it is improperly disposed, or so placed that its fullest value is not given to the room in which it stands.

Over-crowding with ornaments is an atrocity that should be avoided at all costs. Too many ornaments is distinctly worse than none at all. No ornaments show want of taste, a failure to realize to the utmost the possibility of room decoration, and an ignorance of the refinements of life. Too many ornaments show lack of proportion and amount to a vulgar overloading of the rooms, which is even more disheartening than none at all. Of few things is it truer than that too much of a good thing may be bad.

The Garden

The Garden Month by Month—August

AUGUST is the harvest month of the garden. It is the time of realization and completeness. The flower garden is now at the height of maturity. The early plants have bloomed and done with; but the later plants —the plants grown from seed, the rich late flowerers, the plants one has labored for and most wished to see in bloom—these are now in the perfection of maturity, and the garden is ablaze with color as it never was before, and as, alas! it soon will not be again. It is, therefore, the harvest month, the month when all the flower lovers' hopes are realized, and the harvest of labor is complete.

There is now no creative work to be done; that has long since been finished and completed. One can realize now how far right one was in the planning and arrangement. It will be a serviceable thing to make records of the color scheme, jotting down the bunches of color where they especially predominate and studying the excellence of the present result, or arranging for a bettering the next season. It is good, too, to watch one's neighbor's gardens, to note wherein they excel one's own, to see what rare and curious plants he may have, and how successful he may have been with commoner and more frequent plants. Nor should one trust to one's memory in such matters; a little note-book will be useful for this work, and at the end of the season should be richly stored with knowledge and suggestion, much of which should bear good fruit next year. One's own experiences should also be fully noted, for the best of memories are apt to fail at times, and a written record has a value and utility that mere memory can not give.

While the garden has long since been complete, and is now perfected from the flowering standpoint, there is still work to be done. It is a lucky gardener who has no weeds in August, and the person who does not, some warm August morning, discover some gigantic weed in the full pride of blooming where only flowers should appear, is fortunate indeed. With the utmost care one is continually passing over weeds which have a habit of maturing in most unexpected places. Even in these late days the weeder has his occupation, although his work is slight compared to what it was earlier in the year.

Notwithstanding its maturity of bloom the garden must be kept in spick and span order. The lawns must be regularly and frequently mowed, the paths kept scrupulously clean, the plants watched for insect and other ills, the dead flowers plucked off unless deliberately allowed to seed, by which the blooming power of the plant will be greatly decreased. There is always work to do in the garden, and August is no exception to this imperative law.

Yet even in these warm days it is necessary to look beyond to the winter plants and even to the planting of next spring. Pansy seed for early spring blooming should now be sown, in rich fine soil. When the young plants have reached a height of two inches they should be transplanted and set six inches apart. All tendencies to flower should be rigidly checked. When the cold weather comes they may be covered with brush and then with pieces of burlap, which will keep them warm while admitting air at the same time.

Other winter plants should now be started. The seeds of cineraria, cyclamens, Chinese primroses and similar plants should all be sown and the plants given a good start in pots before they are taken within the house.

The School Garden

THE growth of the school garden idea is one of the most interesting phases of modern education. Primarily designed to interest children in garden growth, to give them a real, understandable interest in nature, it has long since transcended this elemental point of view and become a potent force in the educational scheme. Yet its primitive purpose, to interest children in nature, is still of value, and of very great value, and must necessarily always remain so.

The original idea of introducing plant life, with its marvelous story of growth and beauty, into child life is inherently beautiful. It is an idea as beautiful in the city as in the country. Its novelty in city school life is greater than in the country, yet its value as an object lesson in natural beauty is quite as great and quite as necessary in the country. The country child does not take naturally to flowers or to any form of plant life. He has them constantly with him. His father, in most cases, has no interest in flowers as flowers, or in anything that grows save as a source of revenue. A glance will tell him if a field of wheat is a good field, if a cabbage patch will make a profitable yield, or if the potatoes are doing well. He can, of course, distinguish all vegetables at the merest glance, and his knowledge of the rotation of crops may be more than superficial.

But of the beauty of plant life, of its beauty significance, of the profound lessons of germination and growth, he has no idea whatever. Nor is his wife much better equipped. She will have, perhaps, her little door-yard, but save for a few plants around the house there will be nothing at all.

The advocates of the school garden, however, do not stop at introducing interest alone; they do not seek merely to teach how plants and flowers grow—in itself perhaps sufficently valuable knowledge—but they go much further than that, and correlate the school garden to other phases of teaching, so that, in a sense, it forms the basis of the whole school idea. Thus arithmetic is taught in planning and laying out the garden. The multiplication table, fractions, lessons in finding areas and perimeters, measuring distances and other work of like nature all have their place. Later on certain aspects of bookkeeping are introduced, the children buying seeds and receiving bills for them, paying for them with checks and otherwise conducting the garden affairs on a business basis.

Other phases of teaching are illustrated and developed in the garden work. Facility in the use of language is promoted by encouraging and demanding conversations on the work done and things observed. Diaries are kept, and the child trained in writing and in observation. Drawing is helped, and coloring, by the drawing of plant life. Practical lessons in ethics and behavior are developed in the garden work which have a very high value in practicability. One child, for example, will help a sick child; one boy will learn that he must do the joint work necessitated by the development of a concerted scheme; and in other ways the children learn to understand the relationship which must exist between every member of a single community. The variety of lessons thus taught is most considerable.

The Household

The Individual Room

THE plea for individuality in the furnishing of the room is the stock-in-trade advice of all professors of the art of household arrangement. On its face it is very good advice, and, as far as it goes, quite excellent. But advice is only good when it means something and has definite value. It may be worth while, then, to briefly analyze this suggestion, with a view to ascertaining its real value.

Individuality in room arrangement has two aspects, the general and the personal. In a general sense every room should display some personal note. And this personal note should be so marked as to be decisive and characteristic of the whole apartment. It means more than making each room look different or filling each apartment with different articles of furniture; and it is, on the other hand, something quite different from making each room so very distinct that its relationship to the adjoining rooms is simply that of contiguity.

One's own room, we are glibly told, and very often told, should be a reflection of oneself. The suggestion is well worth pondering over. Is human nature, then, so open a book that its innermost recesses may be displayed in the choice of chairs and tables, in the selection of colors, in the tints of the wall coverings and in other articles of household equipment? Do the laboratories of psychology in which so much excellent work is done for the study of mind include such matters in their well ordered courses of investigation? Or is the soul, after all, not to be revealed, nor one's choicest thoughts?

This, of course, opens up the weakness of advice of this sort. Should a person of mild, gentle disposition exhibit these delightful characteristics in the choice of colors and in the curves of furniture? Should the furnishings of the room of a pugnacious person bristle with opposition and display bull-dog tenacity in every article? Yet, unless these qualities are made obvious, how is the advice to be followed, and the room made a true index of the personality that dominates it?

Some recent room idealists go even further, and claim that it is not too much to arrange a room to suit the complexion of the person whose room it is. Thus the story is told of a white-haired woman who dresses in white and receives in a white drawing-room, a combination that very effectively brings out the rare beauty of her rose-leaf complexion. A soft shade of brown is said to form a most effective background to a head of golden-rose hair. And so on. Exquisite affairs such rooms must be, and most helpful to the beauty of the woman for whom they are arranged.

This would seem to be the last word in advice concerning room arrangement, and perhaps it is; it certainly offers fruitful themes for study and experiment. But the value of such suggestions is, after all, not concrete and absolute, but in directing attention to the room and the possibilities of its furnishings. It is a good thing for people to consider their rooms as capable of individual arrangement. It is a good thing to try to make them more beautiful in themselves and better adapted to the person who lives in them. It is good to be told that rooms are capable of giving individual impressions, and it is better yet to try to make them do so.

The Buying of Furniture

THE buying of furniture is one of the most difficult things in the equipment of a home, and it is a singular fact that many stores which are loaded with furniture to the roof offer little serious aid in this most important task. The furniture man has, of course, to suit many tastes and meet many requirements; his wares are apt to be most various and diverse. They consist, without exception, of goods of two great classes, good furniture and bad furniture. These he displays with so much art that the good is thoroughly mixed with the bad. In his heart of hearts he doubtless knows that the bad furniture is not worthy to sell; but he probably regards a bad chair sold as a piece of good business, and he calmly leaves the selection to his customer. If the buyer can not distinguish between good furniture and bad it is none of his business. He is there to sell goods. He very likely would not understand what was meant by the immorality of selling a bad chair or an evil-looking table.

The responsibility for the purchase must rest with the customer. And very few customers attack the problem with adequate knowledge or with any knowledge at all. A piece of furniture that in itself may be very beautiful may not have any real value either of use or of beauty in the modern household. The delicate furniture of the various Louis epochs, for example, has little modern value, even though very beautiful in itself. It was designed for a definite environment and for people who lived and dressed in the modes of a former time. It is distinctly not modern, and therefore not well adapted to modern needs. That such furniture is used to-day and abounds in houses of the wealthy does not in the least alter the fact of its ill adaptation to modern necessities.

It is obvious that the great rule in furniture buying is excellence—excellence of materials, excellence of form, excellence of style, excellence in utility. The word, in fact, sums up, in one way or another, about all the requirements that can be demanded of modern furniture. There are, of course, various degrees of excellence in furniture, for a single piece may be made of good materials, and well made, to boot, and yet be thoroughly ill adapted to modern needs and quite useless as a household convenience.

Another helpful rule in furniture buying is not to buy too much. With persons of average means this advice may seem superfluous, for even a moderate amount of new furniture costs a considerable sum. But the happy housewife, intent on making her home attractive, is very apt to buy more than she needs, and to buy pieces which may be quite unnecessary. It is always well to leave something to a future time. The table or chair that seems so charming to-day may not be found to have any real utility to-morrow. It is not the change in fashions that should be awaited, for such a method would only result in confusion and unseemly mixture; it is rather to avoid filling one's rooms and burdening oneself with more than one actually needs.

Furniture has a utilitarian value that can not be ignored. It must not only be excellent, but it must be useful. It is use which determines its purpose perhaps more than any one other single cause. Chairs must be comfortable; tables must be suited to their uses; beds must be of sufficient length.

Civic Betterment

Ways to Help: The Organization

THE individual can do much; the organization can do more. It is obvious why this is so. Civic betterment, to be good and to accomplish good, must be conducted on a large scale. It is not the single house and garden that gives evidence of public spirit within that is to be commended, nor even the single block or street; wholesome progress is wholesale progress, it is progress on a large scale, evident in many places and in many ways, and giving definite character to a whole community.

The individual can not accomplish this general good, nor should he seek to do so. Individual effort is limited, in most cases, to the confines of one's own property. Outside of that united effort is needed, and the organization comes into use as the most effective means of reaching results.

This organization may have several forms. It may be purely local in its scope, and confined to the residents of one neighborhood, intent only upon the betterment of their own locality. It may be more general, and consist of citizens of a district or ward. It may be a section of a general club. It may take the form of a general body, seeking members from every source, and undertaking a certain amount of general work. It may be an organization maintained for a specific purpose, or it may look to broader results, leaving definite betterment in definite ends to other organization.

Now, the striking feature of any organization is that the body as a whole is stronger than the individual. The organization invariably carries more weight than the person. This is due partly to the fact that an organization of indefinite duration can keep battling at a question longer than an individual; and partly because the connections and ramifications of an organization are so indefinite that the organization has a prestige which the individual can not possibly have.

Hence the popularity of the organization as a means for accomplishing civic betterment. It is not only a popular way, but an effective way. It works continuously, for when the individual's interest flags a new worker is likely to be at hand to carry on the struggle further. Moreover, organizations have, in themselves, a prestige and a power that is often very great, and which helps amazingly toward the desired end.

Membership in an organization is, therefore, a very admirable way to help on the cause of civic betterment. Mere association, however, will not accomplish the best results. Active work and leadership is needed from every source, and the work to be done is, in a general sense, so large and complicated that there is always something for every one to do, some special interest for every one to become identified with. This, of course, means more than the mere payment of dues, beneficial as such a ceremony necessarily is. It means the sinking of individuality, that the community may be bettered. It means, or it should mean, the undertaking of tasks that have reasonable likelihood of accomplishment. It means work for the few and work for the many. It means labor without recompense and for the benefit of others. It is noble, unselfish work when unselfishly undertaken and applied. It means doing something for one's own city and town, and that is a good and useful exercise of the rights of citizenship.

The Architect and Civic Betterment

IT is a strange commentary on the work of the architect that much of the effort directed toward civic betterment is to cover up and improve his misdeeds. The business of the architect is to build, and he must build well and in a beautiful manner, or he falls far short of fulfilling the purposes of his calling. Yet almost the first step toward civic betterment is to cover up, as best it can be covered, the shortcomings and the bad deeds of the architect. Let us, is the cry, plant trees, that unsightly buildings be hid. Let us cover our buildings with vines, that unsightly spots be blotted out. Let us, in short, hide our buildings, that our cities be more beautiful.

The architect is at once the greatest offender against public taste and the leader in civic beauty. Of all art laborers his work alone has a quality of permanence. A statue of stone may be readily broken, or one of bronze melted down; the painter and wall decorator need a building for the display of their art, and the worker in the lesser arts needs a structure in which they can be contained. But the architect is sure of a certain permanency. It is true that in the rapid march of events this permanency may be relative only; it may not even survive the statue or the wall decoration with which the building is adorned; but his labor, if not secure, is concerned with permanent materials and is intended to be permanent.

The architect, therefore, is our chief permanent art worker. Does he fulfill the sacred trust this implies? Does he always construct buildings that are good and beautiful, and which have an art quality as well as that of permanence? The questions need only be asked to be answered in the negative. The architects are doing better work than a few years ago. The artistic standard of building is raising. The artistic value of structures is being more and more appreciated as better examples are being produced. But the sum total of all this effort falls far short of the effort put forth in the golden days of architecture, when building was truly an art, practised by artists for art's sake as well as for utilitarian purposes.

This, however, does not diminish the architect's importance in the work of civic betterment. That he has done better things in other times is but an incentive to better work in the future. And never was his work more clearly marked out for him than to-day, when his business very obviously is to build good and beautifully. No one other single factor is so important in the art of civic betterment. No other laborer has so great opportunities nor so many. Each building he does should be a distinct contribution to the general good.

The architect has no need to be told he should lead in this matter; the leadership is his by right. And this is not because he may know better than others what to do and how to do it, but because the opportunity of doing something definite is his by reason of his profession. The campaign for civic betterment has advanced to such a point that the author of a badly designed building at once proclaims his incompetence, while the creator of a good building is a public benefactor. The architect has many noble opportunities, and he has no better work to do than to meet them nobly. His is a responsibility that can not possibly be avoided.

The Observer's Note-Book

Foreword

THE personal affairs of the Observer are of interest only to himself. There are times he wishes they were not so pressing and annoying, a trait, he is persuaded, of quite general occurrence in the human race. One must, indeed, consider oneself if one would live, and it is impressively true that, if one does not consider oneself no one else is apt to. The only persons in the world absolutely certain of being cared for are criminals. There are, of course, homes and retreats for the aged, for the sick poor, for the mentally deficient, for certain groups of indigents; but there are always more of these people than can be accommodated in the retreats provided by private and public charity, and lodgment in them is often difficult. The criminal, however, is finely provided for, once he is caught, convicted of crime, and placed behind the bars. The State may not love him, it may not even wish to be burdened with him, but it cares for him like a long lost brother, even if it subjects him to the indignity of manual labor, and feeds him on coarse food. The criminal, thus, has no cares; his food and lodging are provided. He has only to wait, and wait, and wait.

The Observer has no wish to paint the criminal's lot as happier than his own; he doesn't believe, for a moment, that there is any joy in such an existence. But the criminal does not have to concern himself with food, clothing and housing, and thus escapes some of the weightiest cares that characterize human existence. And herein the Observer's lot differs widely from the criminal, for all these living questions vitally affect him. Just now his special battle with existence is to read, digest and summarize the accumulations of a month's time on his library table. Piled high with books and papers of all sorts, he wonders if the polished top will ever again be visible. His task, to be plain, is to cull from this material, which grows so rapidly and so quietly that it seems to be self-perpetuating, such matters of interest as will be pertinent to the scope of this magazine, and of interest and value to its readers. His table is large and the accumulations upon it are deep and wide-spreading. At the beginning it almost seems as if the entire range of human knowledge will be covered. This may, indeed, prove so in the end—but now to the beginning.

Suburban Development

MANY years ago the Observer located himself in a remote suburb of the metropolis. It was an ancient corner that progress had not touched, and which had so long passed out of existence as to have been all but forgotten. His nearest neighbor grew cabbages by the thousand each year; great fields stretched out on all sides of him; the pungent odors of the fertilizer saturated the air in the early spring; the tinkle of the seed planters smote it in due season; the nightly departure of the market wagons was the most exciting event. There were, of course, frogs in the distant ponds, mosquitoes close at hand, flies to bother one at all times; but these were mere details, quite insignificant beside the eternal quiet of the place and its remoteness from the roar of Broadway.

There was joy in this remoteness because it seemed assured. But the hand of progress has reached out, and now, in place of corn fields and potato patches, the speculative builder has seized upon the land, and row upon row of small houses, deftly arranged for the accommodation of two families, has usurped the farm lands, and " development " and " progress " are in full swing. The Observer is still able to look from his windows upon the smiling country, but now he need go but a short space upon the earth to find himself in a built-up section, choked with building houses, awaiting only a noisy and assertive populace to entirely destroy his quiet.

Of course he is prejudiced, and fails to understand the value of these improvements. And yet, quite apart from his personal bias, he thinks there is reason for his feelings in this matter. Here was a vast, open tract of country, so remote from the business parts of the metropolis that a journey to it filled a considerable part of the day, morning and evening. Surely here, if anywhere, there was need of a real suburban development, with houses spaced in lawn and garden, with streets shaded with graceful trees, with all the beauty and all the delight of real suburban living. The vacant fields may have been a waste, the farms may have been unprofitable, but surely there was no need to transform them instantly into rows and rows of mimic flats, giving the people who came here no more air and freedom than on the great East Side, save for the wider streets and the absence of the trucks.

Yet such are the ways of men that no space that could, by any possibility, have been built upon is being left without a building. Solid row after solid row, with the horrible corner store, line streets where, but a few years since, were yearly crops of potatoes and corn. No doubt, from the real estate standpoint, perhaps from the owner's standpoint, certainly from the standpoint of the speculative builder who hopes to persuade a number of persons to buy their own " home " in this cruelly treated region, there has been " improvement "; but it has not been improvement that is real, that helps to better living, that makes a better city, that tends to uplift and help.

And how strange those fields are now! For the last time the plow was brought into use. Without ceremony, indeed, such as might properly have accompanied this solemn rite, but with bawling and profanity, and with no thought at all of the significance of the work. The ground broken, then come the wagons and trucks to remove the soil. If perchance a bed of sand is found, the fortunate owner scoops out his land, places it on an adjoining space, piles it mountain high, and smacks his lips over the wealth he has extracted from an ungrateful ground.

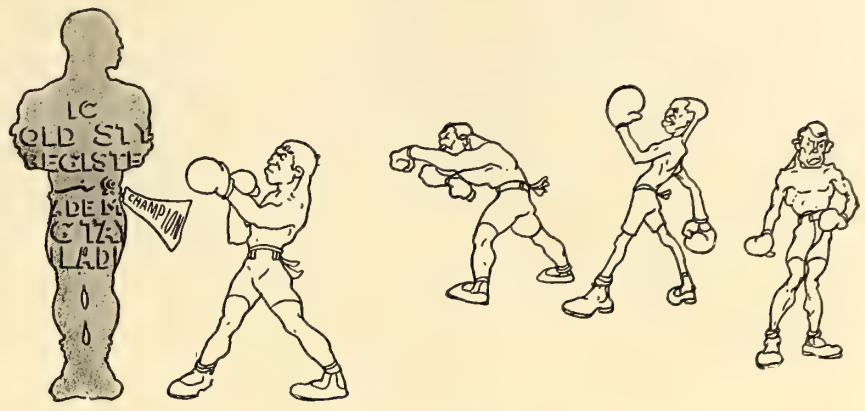
Just as little of the ground will be scraped out for the houses as possible, for prices must be kept down, and there is no money to use in digging deep, in laying strong foundations, in preparing good cellars. Then begins the building; the foundations of stone or of brick. Up go the walls. All sorts of workmen appear. There will be union men and non-union; you can distinguish them by the time they begin work in the morning, the union laborers righteously refusing to begin until the hour set by their rules, the others, apparently, willing to begin at any time. There will be blacks

and whites; there will be Jews and Italians; there may be other races and other nationalities; in any event a great variety, a veritable modern Babel, with only the lack of the towering heights to indicate the difference between our day and that of long ago.

Very amusing some of these folk are. Did you ever see a Jewish plasterer, decked with a bushy black beard, emerge from a plaster tank? The sight is well worth going to see. The bearded workmen are, perhaps, the most entertaining, because so obviously out of place; yet The Observer knows not why nor wherefor. There is an entertaining story in a recent magazine of a gentleman with flame-colored whiskers who has been annexed by a barbaric tribe of North Africans and retained as a source of joy to the populace. No one need, of course, have such appendages; and if they give others pleasure the happy owner should not object. The Observer does not suppose that any of the bearded laborers he wots of regard themselves as properly objects of mirth, but they strike a much-needed comic note in all this serious uproar of activity.

Nothing whatever is permitted to interfere with the carrying out of these operations unless it be the rain. On rainy days a gentle peace and quiet descends upon the land, only to be broken the moment the weather clears. Cold and frost do not stop the work, although the building law has somewhat to say on this topic. And old brick is used by the house whole. Here again the building law comes in; but some special guardian appears to stand watch over these doings, and once the row is up it is swiftly painted on the outside, that the material of the outer walls may be hidden.

So the work of "improvement" and "development" goes merrily on. The real estate men gleefully tabulate the number of houses built each day, and stand ready to sell you a "home" if, perchance, you should be detained in front of one so much as a moment. Of course these people never want to retain this valuable property. They are "home makers," philanthropically intent on providing homes for the multitudes. It is a merry jest. It is a strange "developing" these once green fields are being subjected to; it is a transformation, complete, real, definite, certain. But very clearly it is no betterment; and very certainly, indeed, it is no way to make a good great city good and beautiful.



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THE ARCHITECT AND HIS CHARGES

THERE is a singular prejudice among many people against employing an architect in the designing and execution of one's own house. It is a prejudice that is widespread, because it will be found in many widely separated localities, and it is singular because no one seems able to give a reason for it, or to make clear why it exists and should be recognized. For recognition of the prejudice means that the work shall be proceeded with without the services of an architect. Hence there are quite a few houses, and some other larger buildings, built without the aid of an architect and proudly exhibited by their happy builders and owners as marvels of economy and true triumphs in native unadorned art.

And unadorned art they are likely to be, although their purity may be questioned. It may be well to look into this question somewhat closely, because there is a prejudice against architects in minds otherwise well balanced. It assumes, at times, aspects of mania, as unreasonable as that which our ancestors maintained against helpless old women whom they designated as witches. It is possible the feeling against architects may pass away in time, exactly as the feeling against witches has wholly disappeared; meanwhile, however, a number of buildings thoroughly devoid of interest will have been erected, and a number of very well meaning gentlemen been given an unmerited stigma of contempt.

The business of the architect is to have charge of the process of building. He is in business for this reason alone, and it is for this that he puts in a charge for his services. But the most genial of architects is not a philanthropist in business for his health, helping people to build houses out of the pure goodness of his heart, contributing his quota to the public welfare by the beauty of his art, or promoting human life by the stability of his structures. All of these things, no doubt, the architect hopes to accomplish in due season, and perhaps will do so; but, in most cases, he must have some means of support; he must draw upon his time and his talents for his livelihood; he must do something for bread and butter. Accordingly he charges for his services on a scale that has the support of his professional brethren.

Is this unreasonable or improper? Does it differ in any way from the methods followed by any business men engaged in any occupation? One has but to scan the advertising columns of any daily paper, or runs through the advertising pages of any magazine, to learn that this is precisely what every man of business does, and that it is the same procedure every purchaser meets with in any purchase. There is no reason at all why the architect should do his work for nothing. It is a simple business proposition that he should be paid for what he does.

One might go further than this and maintain, with equal propriety, that not only should he be paid for what he does, but that he should be well paid for it. If it is a business proposition that a laborer is worthy of his hire, it is equally true—or should be—that good work can not be had save at good prices. This latter proposition is a very ordinary and familiar one. Good work fetches good prices, whether the article purchased be a piece of furniture, a whole house, a rare work of art, or services of a personal nature which are not measured directly in articles made or produced. If a man commands a large salary in the commercial world of to-day, it is not because the visible products of his hands and arms are valuable and costly, but because his services as

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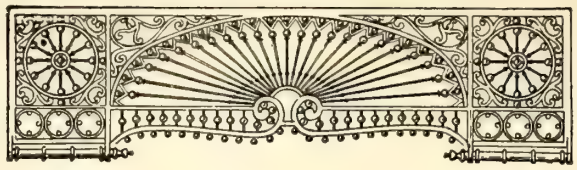

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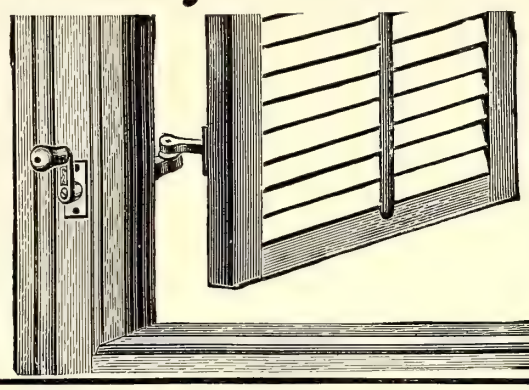

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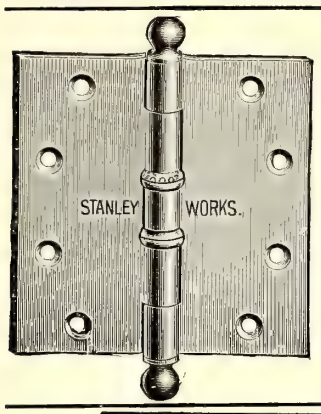

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services are worth exactly what is paid him—and more. It is never less; for the man who is worth less than he is receiving, either in the form of regular salary or in payment for a specific work, will not continue to receive an advanced honorarium after his lessening resources have been made clear.

But the point, however, is not worth arguing. It will be admitted on all hands that if an architect is employed he must be paid; and it will doubtless be admitted also that if paid he should be paid on the general scale of remuneration that prevails in his profession. Whether reasonable or unreasonable, this scale has the surpassing merit of being known in advance, and its total amount can readily be calculated.

This happy process does not belong to every profession. One may indeed be aware how much one's physician will charge for a consultation in his own office; one may know what he will charge for a visit to one's own home; but one never knows what one's lawyer will charge, and one is invariably and fortunately ignorant of the charge that will be put in by one's own personal undertaker. The latter very necessary and useful person may be omitted from the discussion; but the charges of a lawyer are often of a nature to produce excruciating pain; they may cause unpleasant language; they will leave unpleasant memories; they may be matters of permanent regret; but also, if you please, so thoroughly professional as to be thoroughly legal and proper and quite beyond dispute.

In the matter of charges the architect shines with the brilliancy of a noonday sun compared with the monetary operations of the lawyer. No one ever knows—or rarely knows—what the lawyer is going to charge until the work has been done and the bill rendered, when it must be paid or payment will be enforced, and by a process that costs the lawyer very little and which will simply add to what the client must pay in the end. The architect charges a percentage on the amount spent. The money to be spent is known; the rate of the percentage is also known; the financial result may be obtained by one of the simplest of mathematical calculations.

But, it will no doubt be exclaimed, there are architects' bills which have included matters in dispute, and about which the largest possible rows have been raised. This is doubtless true, but the fault in many of these cases, perhaps in the most of them, lies with the client and not with the architect. The architect agrees to do such and such work for so much money. The client, perhaps unconsciously, perhaps because he can not help himself, perhaps because his own wishes and inclinations broaden and increase as the work goes on, demands more of his architect than the latter was bound to contribute for the set percentage. The extra work has involved extra cost in materials; the architect thus expects extra compensation. Could anything be clearer or more reasonable? Yet many a serious break between architect and client has occurred on this very point, to the great rending of mutual self-respect, and the creation of other differences of which neither of the high contracting parties have much to say.

The percentages charged by architects are determined by the chief professional body in the country in which the architect lives and works. In the United States this is the American Institute of Architects; in England it is the Royal Institute of British Architects; in every other country in which there is considerable architectural activity there is likewise a general central body which is recognized as the head of the architectural organizations, and which determines rates and charges for its own citizens. The usage that pertains to

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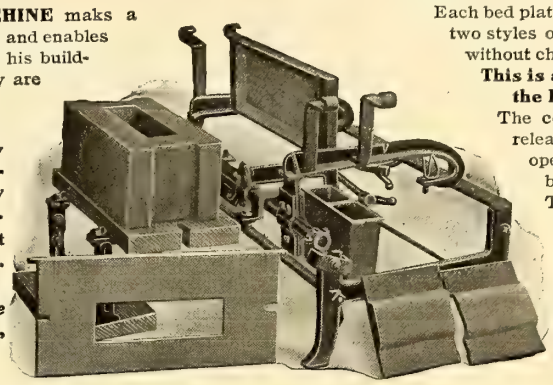

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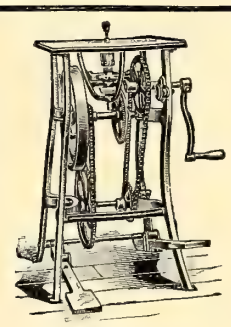

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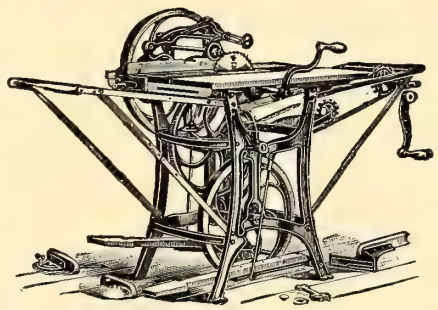

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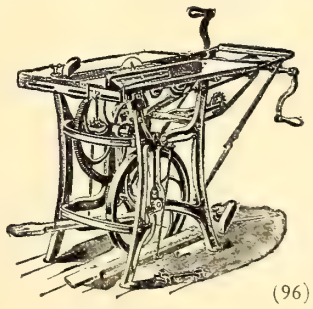

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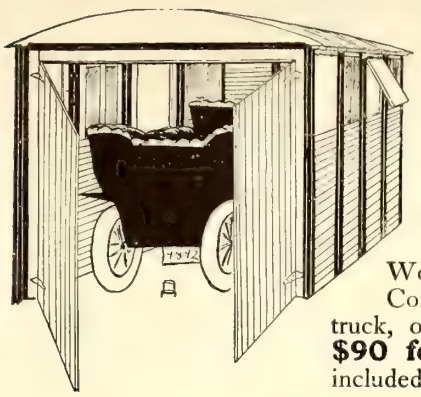

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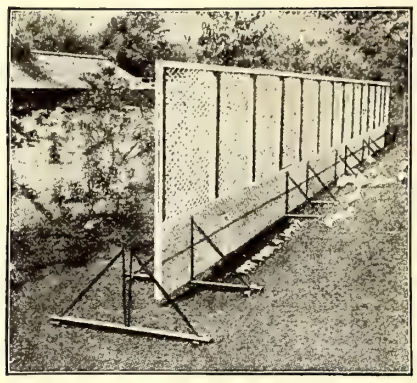

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America is sufficient for the present discussion.

The American Institute of Architects has adopted a "Schedule of minimum charges and professional practice of architects, as usual and proper." It will be worth while to quote this document as illustrating the professional view of the case as understood in America.

AMERICAN SCHEDULE OF MINIMUM CHARGES

For full professional services (including supervision) five per cent. upon the cost of the work.

In case of the abandonment or suspension of the work, the charge for partial service is as follows: Preliminary studies, as per table at the foot of schedule; preliminary studies, general drawings and specifications, 2½ per cent.; preliminary studies, general drawings, specifications and details, 3½ per cent.

For works that cost less than $10,000, or for monumental and decorative work, and designs for furniture, a special rate in excess of the above.

For alterations and additions, an additional charge to be made, and also an additional charge to be made for surveys and measurements incident thereto.

An additional charge to be made for alterations and additions in contracts and plans, which will be valued in proportion to the additional time and services employed.

Necessary traveling expenses to be paid by the client.

Time spent by the architect in visiting for professional consultation, and in the accompanying travel, whether by day or night, will be charged for, whether or not any commission, either for office work or supervising work, is given.

The architect's payments are successively due as his work is completed, in the order of the above classifications.

Until an actual estimate is received, the charges are based on the proposed cost of the works, and the payments are received as installments of the entire fee, which is based upon the actual cost.

The architect bases his professional charge upon the entire cost, to the owner of the building, when completed, including all the fixtures necessary to render it fit for occupation, and is entitled to extra compensation for furniture or other articles designed or purchased by the architect.

If any material or work used in the construction of the building be already upon the ground, or come into the possession of the owner without expense to him, the value of said material or work is to be added to the sum actually expended upon the building before the architect's commission is computed.

The supervision or superintendence of an architect (as distinguished from the continuous personal superintendence which may be secured by the employment of a clerk of the works) means such inspection by the architect, or his deputy, of a building or other work in process of erection, completion or alteration as he finds necessary to ascertain whether it is being executed in conformity with his designs and specifications or directions, and to enable him to decide when the successive installments or payments provided for in the contract or agreement are due or payable. He is to determine in constructive emergencies, to order necessary changes, and to define the true intent and meaning of the drawings and specifications, and he has authority to stop the progress of the work and order its removal when not in accordance with them.

On buildings where it is deemed necessary to employ a clerk of the works, the remuneration of said clerk is to be paid by the owner or owners, in addition to any commission or fees due the architect. The selection or dis-

missal of the clerk of the works is to be subject to the approval of the architect.

Consultation fees for professional advice are to be paid in proportion to the importance of the questions involved, at the discretion of the architect.

None of the charges above enumerated cover professional or legal services connected with negotiations for site, disputed party walls, right of light, measurement of work, or services incidental to arrangements consequent upon the failure of contractors during the performance of the work. When such services become necessary, they shall be charged for according to the time and trouble involved.

Drawings and specifications, as instruments of service, are the property of the architect.

The table of charges for preliminary studies, referred to in the second paragraph from the beginning, specifies that the minimum charge shall be $50; that for works costing from $5,000 to $50,000 the charge shall be one per cent. of the proposed cost; and that for higher amounts the charges shall be a sum equal to two and a half times the square root of the lowest cost. Thus for work costing from $50,000 and under $75,000 the charge shall be $559; between $1,000,000 and $1,250,000, $2,500; between $4,000,000 and $5,000,000, $5,000, and so on.

The schedule of professional practice as to the charges of architects adopted by the Royal Institute of British Architects, partly because it has been deliberately made longer, and partly because it includes some topics which are omitted in the American schedule. But it will be interesting to compare the two, and its reproduction will be a further elucidation of the subject.

ENGLISH SCHEDULE OF CHARGES.

1. The usual remuneration for an architect's services, except as hereinafter mentioned, is a commission of five per cent. on the total cost of works executed under his directions. Such total cost is to be valued as though executed by a builder with new materials. This commission is for the necessary preliminary conferences and sketches, approximate estimate when required (such, for instance, as may be obtained by cubing out the contents), the necessary general and detailed drawings and specifications, one set of tracings, duplicate specification, general superintendence of works, and examining and passing the accounts, exclusive of measuring and making out extras and omissions.

2. This commission does not include the payment for services rendered in connection with negotiations relating to the site or premises, or in supplying drawings to ground or other landlords, or in surveying the site or premises and taking levels, making surveys and plans of buildings to be altered, making arrangements in respect of party walls and rights of light, or for drawings for and correspondence with local and other authorities, or for services consequent on the failure of builders to carry out the works, or for services in connection with litigation or arbitration, or in the measurement and valuation of extras and omissions. For such services additional charges proportionate to the trouble involved and time spent are made. The clerk of the works should be appointed by the architect, his salary being paid by the client.

3. In all works of less cost than £1,000, and in works requiring designs for furniture and fittings of buildings, or for their decoration with painting, mosaics, sculpture, stained glass, or other like works, and in cases of alterations and additions to buildings, five per cent is not remunerative, and the architect's charge is regulated by special circumstances and conditions.

(*Continued in September Number*)

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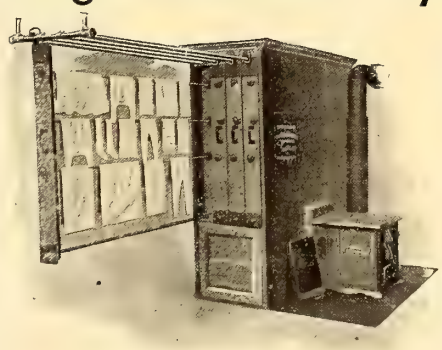

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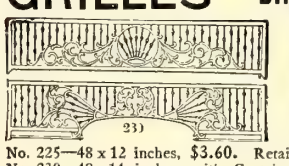

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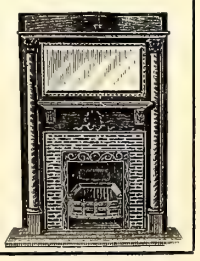

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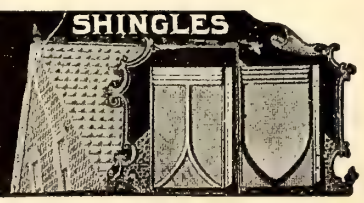

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6. Library Walls

IN any room intended for reading and study walls covered with blossoms or intricate, over-accentuated designs are distracting and unsatisfactory. Books are in themselves a decoration. The colors of their bindings—reds, greens, blues and gold—broken by the tawny hue of old calf, have richness of tone. In those libraries in which the shelves do not run to the ceiling, a plain background above the shelves is a necessity primarily on account of the books, but also as a background for the busts, casts or pictures.—Lillie Hamilton French.

7. An Apartment Sideboard

THE limited space in the modern apartment necessitates furniture that takes as little room as possible. The commercial sideboard is often a very dreary affair, a large piece of furniture, built up with much polish and a badly framed mirror for its chief adornment. A "home-made" sideboard or row of shelves is often better adapted to apartment house use than the ready-made affair of the commercial stores. Five or six shelves, made by a carpenter in the style of an old-fashioned cupboard or dresser are often much more decorative. The shelves can be painted or stained and curtained with the same material—demi denim or cretonne, which is used for the window drapery. A convenient design allows for three wide shelves below and four narrower ones above.

8. Cooling the House

FOR the purpose of cooling the air of a single room small electric fans are in very general use. These serve to propel the air through the room at a high rate of speed, and thus produce a cooling effect through the greater evaporation from the surface of the body. The air of an entire house may be cooled by passing it through a chamber filled with ice, the air being propelled throughout the different parts of the house by means of a large fan or blower. This method is, however, very expensive, as it requires large quantities of ice or the employment of an ice machine of one or more tons daily capacity, according to the size of the house to be cooled and the initial temperature of the outside air. Passing the incoming air through a large screen over which a spray of ice water is falling will also serve to cool the air. Liquid air has been employed as a means of cooling the air of theaters in summer, and has proved satisfactory, although this is also expensive.—Dr. D. H. Burgey.

WATER NOTES

Rain-Water Storage and Purification

RAIN-WATER, especially when gathered in the country, is fairly clean, points out a recent writer, and if filtered and stored in suitable receptacles is a great acquisition, more particularly for washing purposes. It is best, whenever possible, to collect and store the rain-water as near the roof as practicable, thus saving expensive pumping machines and underground drains and tanks. It is needless to say that a large overflow is essential to prevent flooding in time of heavy storms.

There are two means generally adopted for removing many of the impurities, such as soot and roof washings, from rain-water. The separator, which allowed the first portion of the water to run to waste and then by a rocking motion passed the remainder to the storage tanks, is effective, but, of course, there is waste of water, which in a dry season was a consideration; while a filter composed of broken bricks, ballast and sand is most useful, but needed occasional cleaning. Some favor a small settling chamber divided from the filter by a brick wall built with half a dozen courses, dry at the bottom, giving upward filtration, thus avoiding to a great extent choking of the upper surface of the filter, as in the case of downward filtration. All the tanks need an overflow, but this should not be connected to the soil drains.

Destroying Algae in Water Supplies

THE importance of maintaining all water supplies at the highest degree of purity and wholesomeness is too well recognized to require discussion. The United States Department of Agriculture has recently published a bulletin dealing with this problem of purifying water, and Messrs. G. T. Moore and Karl F. Kellerman, in the summary of their pamphlet, declare that the disagreeable odors and tastes so often present in drinking water are due almost exclusively to algæ, although the economic importance of studying these plants has not been recognized until recent years. These algal forms are widely distributed, and reservoirs are often rendered unfit for use by their presence. The methods now known for preventing the objectionable odors and tastes have been found either too costly or ineffectual. A new, cheap, harmless and effective method was therefore required to rid reservoirs of the pests, and it has been found that copper sulphate in a dilution so weak as to be colorless, tasteless and harmless to man is sufficiently toxic to the algæ to destroy or prevent their appearance. The mode of application makes this method applicable to reservoirs of all kinds, pleasure ponds and lakes, fish ponds, oyster beds, watercress beds, etc. It is also probable that the method can be used for destroying mosquito larvæ. At ordinary temperatures one part of copper sulphate to 100,000 parts of water destroys typhoid and cholera germs in about three to four hours. The ease with which the sulphate can then be eliminated from the water seems to offer a practical method of sterilizing large bodies of water. Definite knowledge in regard to what organisms are present, the constitution of the water, its temperature, and other important facts are necessary before it is possible to determine the proper amount of copper sulphate to be added. A microscopical examination thus becomes as important as a bacteriological or chemical analysis. No rule for determining the amount of copper sulphate to be added can be given. Each body of water must be treated in the light of its special conditions.

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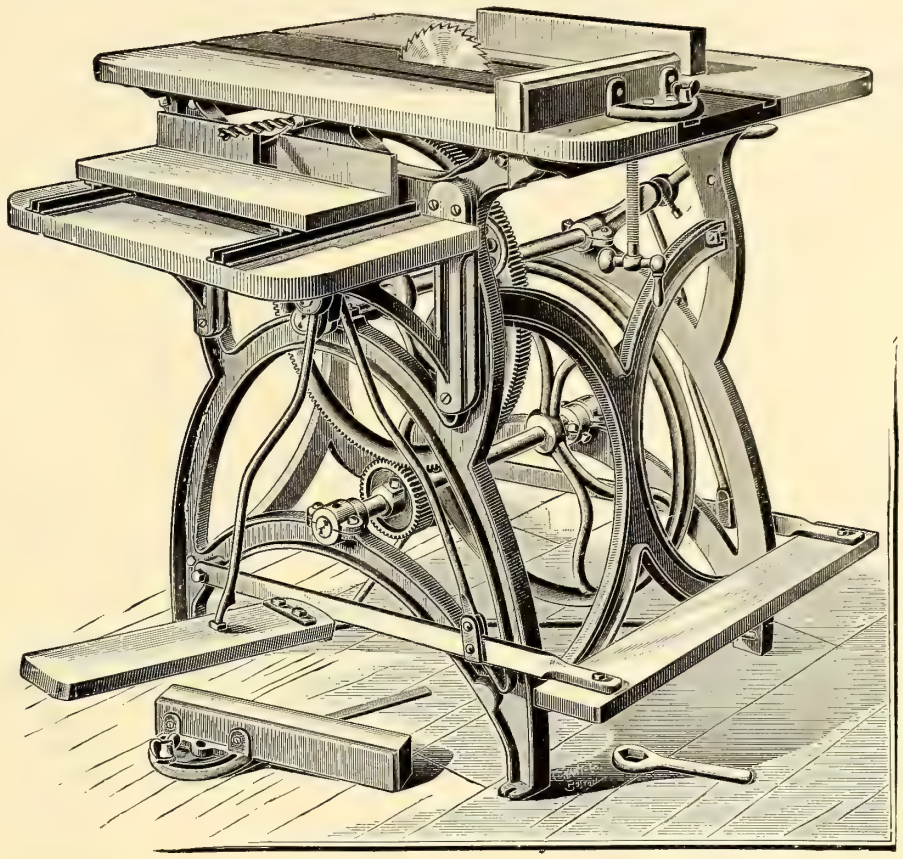

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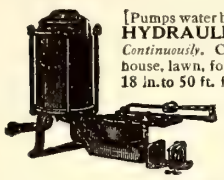

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OWING to the inferior quality of many of the earthenware pipes used for underground drainage, cast-iron pipes are now frequently substituted for them. So long as cast-iron pipes can be kept free from corrosion they may be regarded as being satisfactory for drainage purposes. Corrosion, however, soon sets in, with the result that the velocity of flow of the sewage matter in the pipes is seriously impeded, and the efficiency of the drain is lost. Details have been given of a number of tests made on various preservatives of cast-iron pipes by a weak solution of sulphuric acid, in every case the preservative being affected. It might be argued that a system of house drainage was not required to stand the action of acids, and that these tests were no guide as to the suitability of cast-iron pipes connected with one of the preparations mentioned for the carrying away of soil and waste from dwelling houses. It would seem on the contrary, however, that a drain should be able to stand the action of any kind of liquid which might be poured into it. No objection on the point could be made against fireclay pipes of first quality. Tests made on fireclay pipes led to the following conclusions: (1) That a six inch layer of concrete round a pipe made the pipe sufficiently air-tight. (2) The liability to fracture through unequal settlement of the ground on which they are laid may be overcome by the laying of a bed or layer of concrete underneath the pipes. For the joints a slow-setting cement, thoroughly cooled and aerated, should be used, and it should be well stayed into the joints so that all the air in the cement be forced out and a thoroughly air and water tight joint would be the result. With regard to cost, also, there was considerable economy in the use of fireclay pipes.

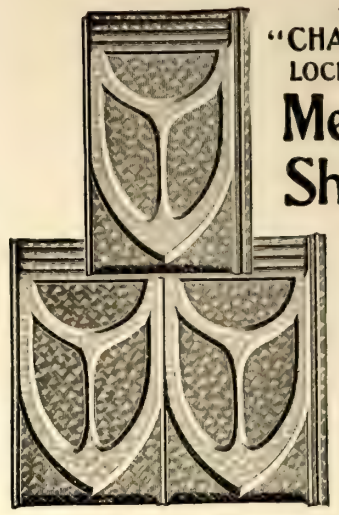
NEW BOOKS

Garden Design

THE BOOK OF GARDEN DESIGN. By Charles Thonger. New York: John Lane, 1905. Pp. 90. Price, $1.00.

From cover to cover this little book is filled with valuable, helpful, practical suggestion. It is one of those rare English garden books which, written in England for English readers, and therefore concerned chiefly and, indeed, quite exclusively with English conditions, is so completely general in its treatment as to be as useful in America as in the country in which it originated. The book is at once theoretical and practical. It is theoretical in so far that the author presents no schemes for garden design, offers no concrete advice as to how to lay out a definite plan, abhors, in truth, ready-made plans, and offers a much-needed word of caution against applying a general design to varied conditions. The reader who seeks, therefore, for definite advice as to how to lay out his garden, with diagrams of paths and plants, will fail to find in this book the particular kind of advice he is looking for.

But he will find much that is more valuable. Theoretical as the book is in a certain sense, it is eminently practical and wise in its treatment of the whole subject. If the author does not tell us just how to lay out a garden on a set plan, if he does not offer concrete suggestions, he does give so much advice, so much practical, useful information, that the intelligent garden designer will be both helped and



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stimulated in his work, and will return to these pages again and again for inspiring suggestion.

The book is, in short, one of singular value. It is markedly devoid of fads and fancies, unless it be the author's frank confession of his little sympathy with the elaborate arrangements of Le Notre and other older designers. His book is not even a plea for the "formal" garden, a tendency toward which, in America, is becoming almost too pronounced, but discusses the arrangement and effect of the garden in a broad, general way. It is exactly the kind of book every garden designer needs. It is a book of garden arrangement and planning. Of the growing of plants and trees, of the shrubs to use, of the bulbs to plant, of the technical processes of garden making it has nothing to do. The growing knowledge is presupposed, and rightly; for in garden making the arrangement of the garden, the utilization of the site, the direction, form, length and purpose of the paths, the location of the lawns, the utilization of the terrace, the things which help in producing the effect—these are matters of supreme importance, which might well be treated in a larger volume than the present one, but which are here admirably condensed and summarized.

Mr. Thonger argues eloquently for the individual garden, for the garden designed for itself, for the design suited to one spot and to no other. Each garden, he writes, must be treated, as regards its laying out, simply and solely on its own merits and possibilities. It matters not, he adds, whether we are dealing with a humble quarter acre attached to the modern villa, or have in hand the broad surroundings of the country mansion. There is no rule-of-thumb for either; each is worthy of just as much love and care as might be bestowed were it the only garden in the world.

And he is equally sound in discussing general principles, which, pure theory as they may seem to be, are, after all, the very fundamentals on which garden design and garden success—for garden success rests on garden design—depends. Whatever our models, he writes, our work is bound to prove unsatisfactory unless beneath the outer veneer which proclaims its origin there is observable a respect for nature's teaching and a due regard for the dictates of artistic feeling and ordinary good taste.

The eleven chapters into which the book is divided well explain its scope. An introductory chapter on gardens and garden designers is a rapid historical sketch of garden design. It is followed by a brief and exceedingly valuable discussion of general principles. The selection of a site, walks and lawns, formal and landscape planting, kitchen garden and orchard, the treatment of water, hardy herbaceous perennials, plants for alpine, aquatic and bog gardens, flowering trees and shrubs, and hardy climbers form the other topics treated in the handbook. It is a book crammed with suggestive and practical suggestion, and well deserves more than one reading.

A General Building Code

BUILDING CODE RECOMMENDED BY THE NATIONAL BOARD OF FIRE UNDERWRITERS. New York, 1905. Pp. 263.

That there is a widespread feeling that definite, positive and efficient steps be taken against the gigantic waste of property through loss by fire and loss of life due to the same cause has been apparent for some time. Many parts of the United States have been visited by severe fires in the last few years, and the loss, both of property and of life, has been so great that the need of remedial measures is now evident on all hands. The lesson has been a costly one, and has been brought home

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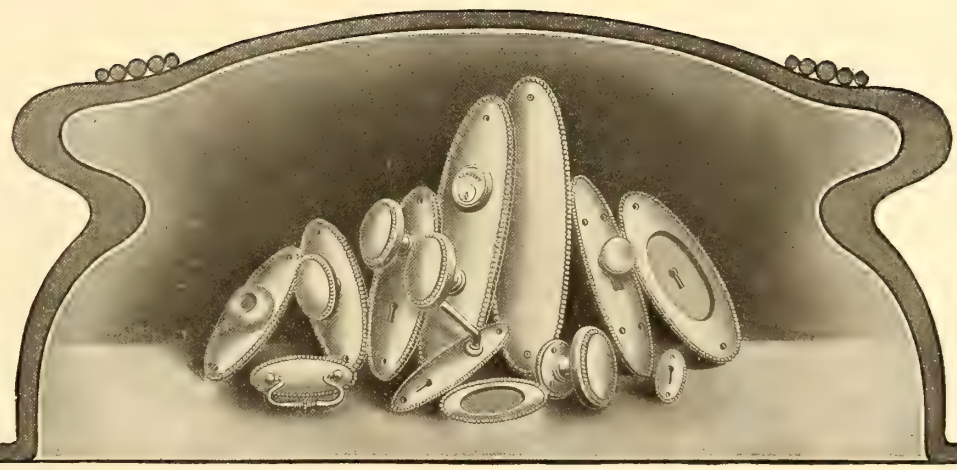

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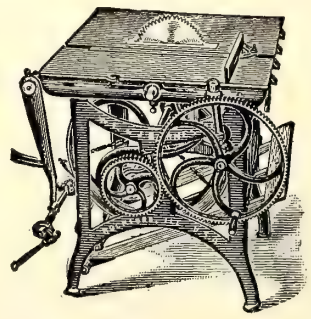

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time and time again. The point has been reached when further object lessons will not be required. The time has surely come when efficient remedies must be applied and will be cordially welcomed.

There are obviously but two ways in which fire losses, both of life and property, can be remedied. One is so completely to arouse public opinion as to the necessity of greater care in construction and of greater care in the handling of fires within and without the building; the other is to provide remedies by law, through the enactment of a building law which shall provide for proper construction, and which will make buildings of all kinds better adapted to resist fires of any sort.

It is apparent that the first of these remedies will fail in the future, as it has failed in the past, in accomplishing anything like the work desired. The very diversity of our population, the diversity of our building materials, the diversity of the conditions under which buildings are erected and used, render any educational campaign doomed to failure at the outset. Certain classes of people, certain grades of buildings, can always be reached by such means; but the positive results obtained are small and inconsequential. The educational campaign is valuable, of course, because everything that tends to educate the people as a mass is helpful; but it is much too costly of time and much too indefinite in its results to be permanently valuable.

The law, and the building law. is the single efficient remedy. The law can permit certain kinds of construction and forbid others. It imposes penalties; it provides for the punishment of offenders. Even if ineffectively applied, it is a great step and a good step in advance. For many years our larger cities have permitted the construction of buildings only under the limitations of a building code. In some instances, as in that of the city of New York, this code is a highly specialized law, dealing with great minuteness with every possible requirement and condition. The building conditions in New York are, perhaps, more exacting than in other cities, and its law has, in a sense, come to be regarded as the model for building codes elsewhere.

The relationship between a building code and the safeguarding of property against loss by fire is very close, and the remedy is quite as obvious. If a fire loss means the destruction of a building, it is obvious that if the building has been constructed so that it will not burn, if the rapidity of the destroying element is checked, if apparatus and devices are supplied that will hinder a fire, there must be less loss than if no preventive construction steps had been taken. By requiring care in construction, therefore, the building code becomes a medium for the lessening of fire losses. It is concerned, of course, with other subjects, as, for example, the many questions relating to the stability of structures, but its value as a fire lessener is very great.

The National Board of Fire Underwriters has performed much valuable work in disseminating literature relating to protection against fire losses. It has realized, for some time past, that a general building law would be the most effective agent that could be applied toward diminishing the losses by fire. The subject does not appear to be one that can be reached by national laws, and the difficulties of securing general legislation by States is very great. It has, however, now taken a very long step forward in this most important work by drafting a general or model building code, which has been prepared to meet general conditions, and which has been submitted to the authorities of the leading

towns and cities of the United States with an urgent appeal for its adoption.

This model code has been prepared by Mr. William J. Fryer, who is largely the author of the New York City code, and who has revised the New York code to meet general conditions, thus producing, with much other specialized help, the present model code. This is neither the place, nor is there here opportunity, to examine the model code in detail, but the auspices under which it has been produced entitle it to the most favorable consideration. It presents the argument for an efficient building law in a concrete form, and it presents it in the best way it has yet been brought forward. As a basis for a local building law this code has exceptional value, for it can readily be adapted to local conditions and made to meet the special requirements of various localities. It emphasizes in a very emphatic way the earnestness of the National Board of Fire Underwriters in its campaign for better building and in its protest against wanton and unnecessary loss by fire. The code is, of course, quite complete in the subjects it treats of, and has been printed a good style with an ample index.

Church Architecture

THE RISE AND DEVELOPMENT OF CHRISTIAN ARCHITECTURE. By the Rev. Joseph Cullen Ayer, Jr., Ph.D. Milwaukee: The Young Churchman Co. Pp. 64.

Every book which has for its avowed object the broadening of the popular interest in architecture deserves a welcome. Dr. Ayer's book, which originally appeared in the columns of the Living Church—a fact to which it owes its form—is a well meant effort to present some of the leading principles in church architecture as illustrated in historic buildings, and has been carried out with considerable success.

His method has been to select certain buildings, or groups of buildings, as typical of the various periods of the development of Christian architecture, and, by giving an adequate account of these churches, to draw a graphic picture of progress in church architecture. It is an excellent plan, and has been well executed. The buildings chosen for treatment are exactly those most typical of their especial period, and the author presents the chief facts of their history and their relation to contemporary structures in a clear and satisfactory manner.

The book frankly makes no claim for completeness, nor does the author make any effort to treat the history of architecture, even as illustrated in churches only, with completeness. It is a book intended to arouse interest, and will serve as an admirable stepping-stone to further studies in the fascinating subject of which it treats.

Like many writers who approach church architecture from an ecclesiastical standpoint, Dr. Ayer refuses to believe in the growth of a real architectural style later than the English Perpendicular Gothic. For him the Renaissance has no message and has no products. It is quite true that there is little contemporary church architecture of permanent value, but it is most emphatically true that the Renaissance in its golden period produced great churches, churches as much churches in an ecclesiastical and architectural sense as any building erected in the Gothic period. Dr. Ayer is quite justified in bringing his book to an end at any point that suits his own convenience or which meets his views; but he clearly lessens his value as a leader in the subject of good architecture by closing his eyes to a period which produced some of the most impressive and most original creations of ecclesiastical architecture.

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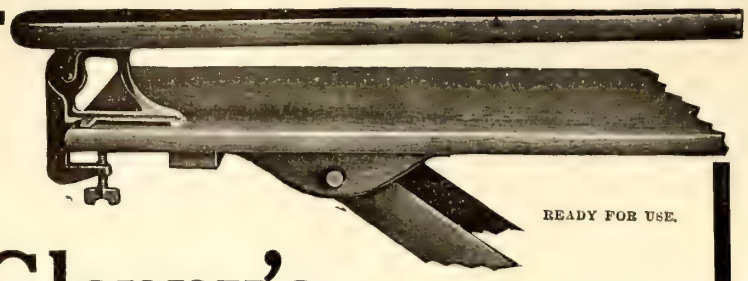

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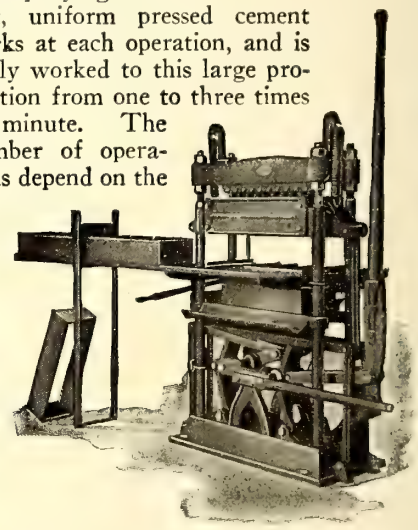
PUBLISHERS' DEPARTMENT

Pressed Cement Brick Machine

A GENERAL fact of great importance in the building interests of the country is the rapid substitution of concrete substances for the old materials. Cement, with its practical qualities of plasticity, durability and economy, and capable of giving the necessary artistic conditions required of color, tint and texture, is now to be reckoned with as one of the chief features in structural industries, and there are no signs that any royal decree will be issued by architectural experts against its vast and rapid introduction. One popular form of its utility is shown in the adaptability to be manufactured into bricks by machinery on a scale of production that will enable it to meet all demands, and in various styles that are bound to prevail between the embellished and the plain. The capacity of one machine that is devoted to this work is about seventy-five styles of brick already regularly made, with chances of an infinite multiplicity to follow the moods of the designers. Besides this number it turns out patterns of special kinds made to order. In our view, these numerous samples, forming an array of specimens that climb by gentle steps from the very simple to the most beautiful, are impossible to produce by any other means as well. The apparatus is the Helm Brick Machine, manufactured by the Queen City Brick Company, of Traverse City, Mich., and is shown by the accompanying illustration. It makes ten perfect, uniform pressed cement bricks at each operation, and is easily worked to this large production from one to three times a minute. The number of operations depend on the yard arrangement with reference to mixing materials and yarding the output—a capacity of a thousand bricks a day per man up to ten men, producing ten thousand without a mixer. The use of a mixer decreases the cost of mixing seventy-five per cent. and enables seven men to do the work of ten with the machine. Every brick made is a pressed brick, and ornamental ones are made as quickly and cheaply as the plain by using the special plungers furnished each device free of charge. So far as machinery is concerned the machine is a complete cement brick plant. It works with a pressure of eighty thousand pounds, or eight thousand to the brick. They are pressed face up, securing sharp lines, and easily colored or made richer on the face with but little additional cost. The handling is labor-saving on account of being pressed on wooden pallets, five to the pallet. These are easily removed from the machine and placed in cars or racks, thus avoiding the care of each brick separately. The design of the machine is scientific, and it is practical in construction. It is equipped with ten plain and the same number of ornamental plungers, each of the latter of different design, and by placing them in the press



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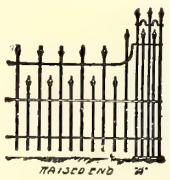

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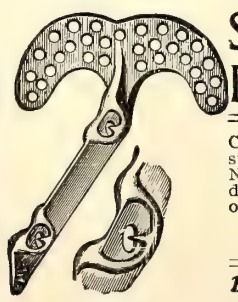

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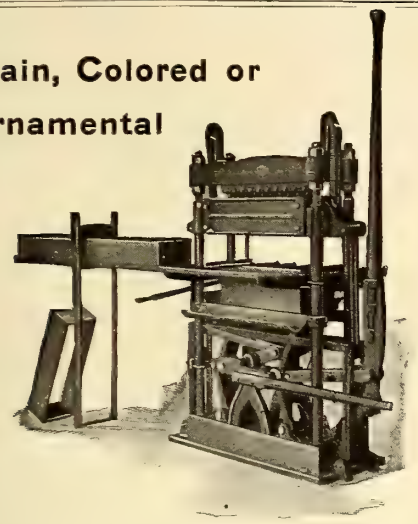

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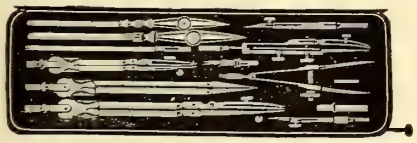

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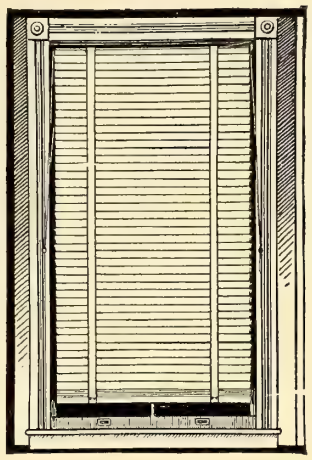

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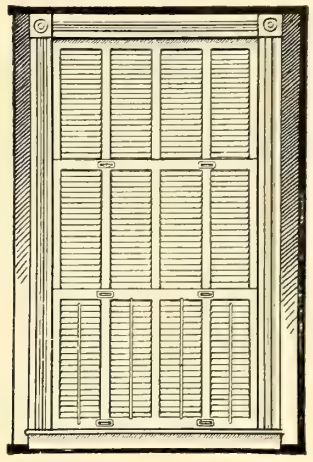

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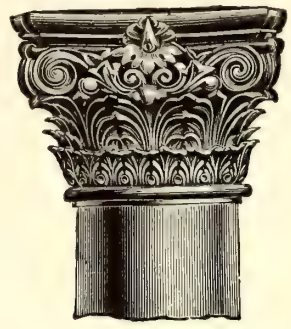

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a few minutes ten various patterns are produced at once. The brick being pressed face up, the cement box can be filled nearly full of natural colored mixture, and then colored mixture of richer material added insures a well tinted face brick impervious to moisture. The method of operation is simple and convenient. Two pallets are placed within the cement box shown in the engraving. The box is then filled with material, passing along the track to the machine and then into it. The front and side levers are then operated, and the bricks are ready to remove. By working the small lever at the left end of the machine, the cement box, which has been forced down over the table in operation, raises to position for removal and return for refilling. The above firm in its catalogue compares the product of this machine with common clay pressed brick and block construction in very surprising statements, but the successive observations are so carefully made that no exaggeration can be implied. Its literature also gives numerous advantages of this contrivance, which is recognized by engineers, machinists and contractors as an unsurpassed factor in revolutionizing the brick industry. It is easily transported. Take it to the sand bank, deliver cement to it and one has a brick yard that will produce plain pressed bricks or those most highly ornamental to rear the finest structure. Or the little plant can be established on the building site and bricks made there. It is plainly a boon to the utility of cement and cement construction. It enables the builder to make the brick for his own structures, the contractor to save the brick maker's profit, the clay brick maker to produce a pressed facing brick in connection with his common clay product, thus widening his field, and concrete block makers to complete their plants so as to produce cement brick as well as blocks. Concrete has been tested for years, and is recognized as unsurpassed in strength needed for construction purposes. The mixture used in the machine is much the same as for other forms of concrete work, requiring Portland cement and clean, sharp sand free from clay and foreign matter. The apparatus is manufactured under the F. Helm patents, all territories east of the Mississippi River being exclusively controlled and machines manufactured therefor by the Queen City Brick Machine Company, of Traverse City; while the country west of that river is held under like conditions by the Helm Brick Machine Company of the same place.

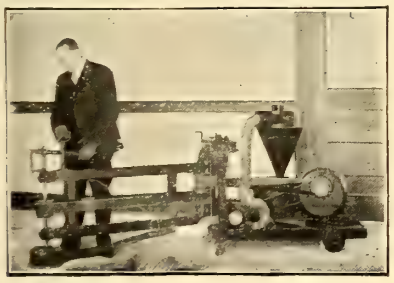
Metal Spanish Tile

IF ANY one claims that metal roofing has no noteworthy or vital advantages, a study of the various points and qualities of the styles made by the Berger Manufacturing Company should be an excellent means for artistic and practical instruction on the subject. This is easily done by procuring the latest illustrated catalogue, sent free on request. If there is any proof in half-tone accuracy (and the art is very successful in reproducing buildings), the test pictures shown in the issue No. 2 are indeed conclusive. The accommodation between the metal roofings and the many and various examples of really pretentious structures is there perfectly shown, and the color, texture and relief effects give that desired artistic capping to high class architecture as gratifying as that reached in Spanish clay tiling. All the modes of grouping and massing of tile which render the Spanish so beautiful may be followed in correct fashion by the employment of the patterns made by this company. Being absolutely accurate and invariable in construction, their application makes it easy to establish any direction of line, straight, curved or radiating,

and they fit so evenly as to acquire that uniform and constant appearance which removes it from the commonplace. Metal tiling is a suitable roofing for residences as well as public buildings, and has none of the disadvantages of the clay type. The plates shown in the catalogue explain the high and vertical side guard construction, in which expansion and contraction are fully provided for and capillary attraction completely overcome, making it absolutely storm and water proof. The plates are large enough to enable the roofer to apply them rapidly and cheaply, and a great advantage in their use lies in the fact that no special framing is necessary, nor need it be more than ordinarily strong. The book gives very plain illustrations of the construction and manner of fastening tile roofing, shows how to apply valley water guard, hip molding and flashing, and graduated tile for circular roofs, domes, bell shape towers and all conical surfaces. It contains numerous examples of finials and terminals, artistic hip and ridge moldings, valley guards and hip flashing, and "Spanish," "African Horn," "Pan-American" and "Twentieth Century" tile roofing. The metal tiles are manufactured of copper and zinc galvanized steel terne tin plates. Besides this important output of the works at Canton, Ohio, the firm designs and makes steel office, bank, library and vault specialties and steel furniture, fixtures and filing devices; and furnishes plans, specifications and estimates on all kinds of steel equipment. The main office is at Canton, Ohio, and branches in Philadelphia, Boston, St. Louis and New York, at No. 210 East Twenty-third Street.

Floor Surfacing Machine

A MACHINE for surfacing floors quickly, cheaply and neatly, and operated by electric power obtained from power companies or generated by a small engine and generator in a wagon, is shown in the engraving illustrating this article. The apparatus is



FLOOR SURFACING MACHINE.

designed to meet any condition arising upon the surfacing, cleaning and polishing of floors, new or old, hard or soft, big or little. It does the work with dispatch, evenness and at a small fraction of hand labor cost. A long list of places, including government buildings, private dwellings, school houses, hospitals, rinks, dance halls, platforms, hotels, decks of steamers, sailing vessels, etc., is available that attests the rapid and invariable accomplishment of its work. The invention is simple. A frame on wheels carries a swinging arm provided at its end with a polishing disk furnished not with knives, but with sandpaper varying in fineness with the character of the floor. A two horse-power electric motor drives the disk at a speed of two thousand revolutions per minute, so that a given area is smoothed off in a fraction of the time required by a hand polisher. All the dust and scrapings are sucked through a pipe by a fan and deposited in a receptacle provided for the purpose. One man guides the machine about the room. When he shuts off the current and wheels the electric polisher through the door, he leaves behind him a glossy, smooth floor, without any

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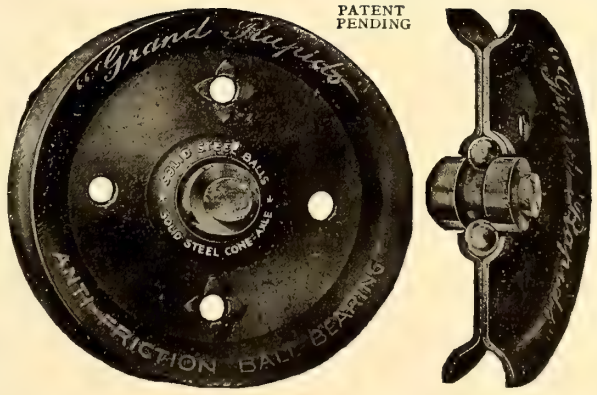

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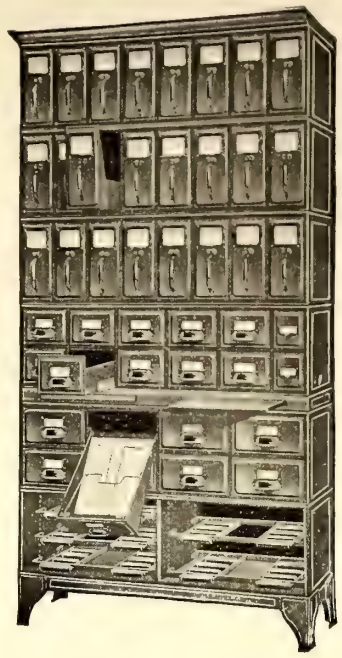

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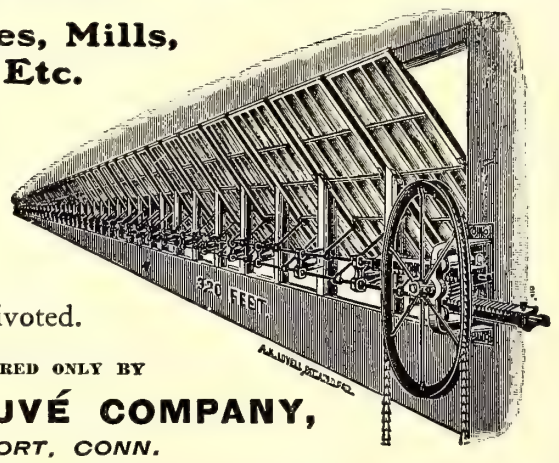

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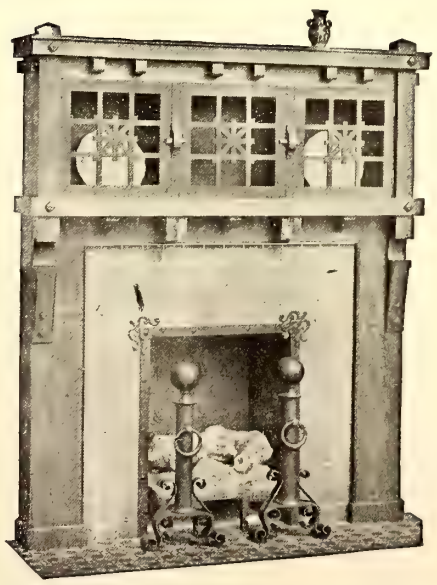

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of the marring imperfections that regularly appear in handwork. Wax or other polishing material can be readily applied and brought to a high polish by covering the revolving disk with an ordinary cloth. Mounted as it is on wheels, and light in design, the machine can be wheeled as readily as a carpet sweeper. It does not require skilled labor to run it, and being a perfect dust collector it is possible for stores, offices and many areas to be polished during business hours. Probably there is no form of indoor hand labor more monotonous and exhausting than polishing floors, and as many indications point to the time being near at hand when contracts will specify machine-surfaced floors, that kind of hard work of the old style would have to be employed if it were not for the fine apparatus under notice. The new power being perfect in its adaptation to attend to all sorts of floors will never be counted on to "decline the toil." Especially will this amelioration of labor be appreciated in the case of floors just completed, where there is always an extra annoying amount of work necessary to effect the proper polish after scrubbing. By the use of the machine the scrubbing is done away with, thereby saving the quality of the floor and the expense of the cleaning, which is fifty per cent. of the cost of machine surfacing. By the new method the floor is in the best attainable condition to receive the painter's finish. In private dwelling houses, hotels and all places where carpet and linoleum are used, surfaced floors are a matter of sanitation, economy and, when partly exposed, of appearance. Sanitary, for the reason that the friction caused by the rollers with the wood fills in the cracks, so that dust and other germ-bearing substances can not collect. Surfaced floors are economical, for the reason that carpet laid over a smooth floor will last much longer than over a rough one. Walking on a carpet causes friction, but if the contact be with a smooth, polished floor the friction is minimized. If a portion of the surfaced floor be exposed—for instance, if rugs are used—the base portion may be stained to represent hardwood, and only the closest scrutiny will reveal the difference. The friction caused by the operation of the machine draws the sap to the surface and leaves the floor in the right condition to be stained. When plasterers and painters are through with their work, there is a vast and stubborn amount of lime and paint stains scattered about. Scrubbing will not take these out, since they have entered into the wood fiber in liquid form. The machine removes this coating and makes the floor as slick and clean as the surface of an oak table. Another favorable point for the device is in the fact that it is not necessary to remove furniture from a room in which the machine is working. In hospitals absolute cleanliness is essential, and there must be no cracks nor crevices in which dust and dirt may collect. The machine will render the floor superficies of these institutions as smooth as glass, and, consequently, as sanitary as mechanical treatment can make them. The machine started its career of dressing, truing and brightening floors in the extreme West, and is now beginning to be of service in the rest of the country. Any information beyond the scope of this notice will be gladly given by The Rapid Floor Surfacing Machine Company, Room No. 608, Flatiron Building, New York, N. Y.

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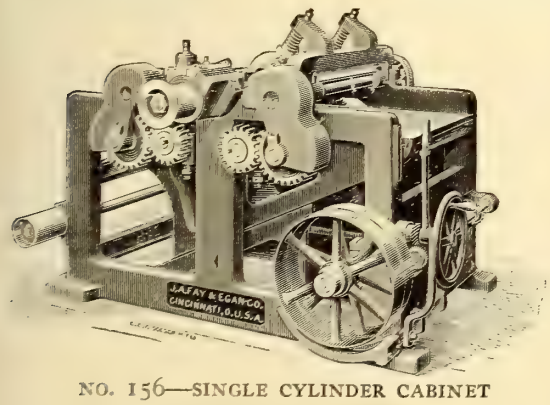

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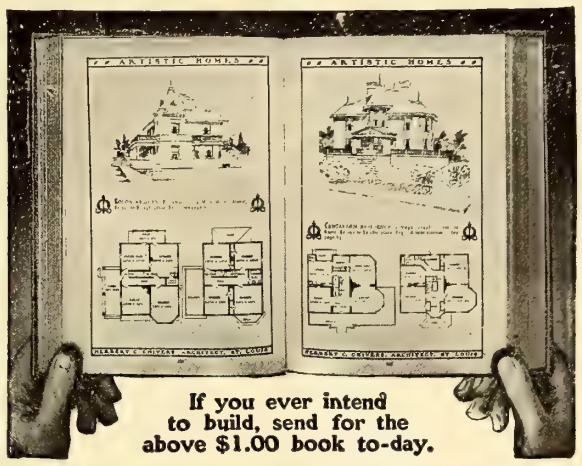

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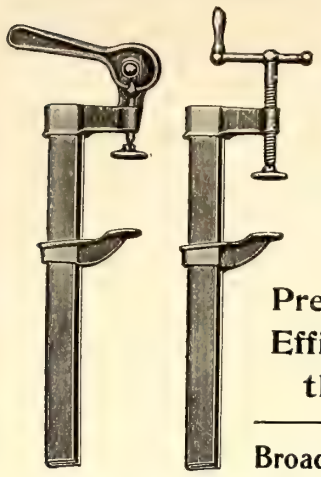

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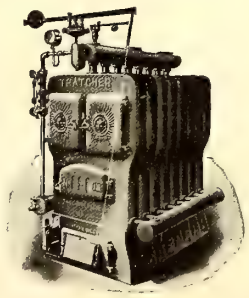

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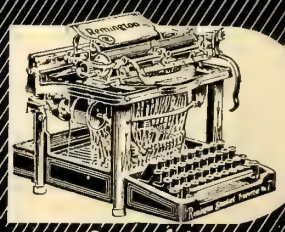

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SEPTEMBER
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AMERICAN HOMES AND GARDENS

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Vol. I
No. 3

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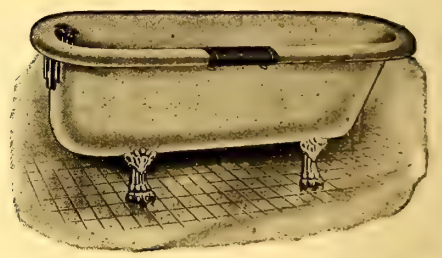

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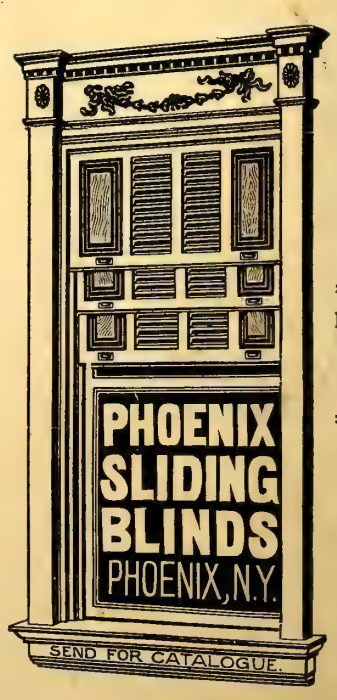

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NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be enclosed for postage if the writers desire the return of their copy.

The Garden

"Woodcrest," The Estate of James W. Paul, Jr., Esq., Radnor, Pennsylvania

INDEXED

AMERICAN HOMES AND GARDENS

Volume I · September, 1905 · Number 3

The East Terrace

"Woodcrest," the Estate of James W. Paul, Jr., Esq., Radnor, Pennsylvania

Monthly Comment

IS HOME life deteriorating? Mrs. Henry Mills Alden says it is, and in proof of her assertion draws an interesting picture of the old-type home life, with the various members of the family busily engaged, of an evening, in quiet domestic work or in reading, and contrasts it with the home life of to-day, in which the elder women are away intent on outside activities, the men out at the club, even the boys finding entertainment outside the home walls. All this is true enough, but, as Mrs. Alden herself points out, it is a tendency of the time rather than any deliberate perversion of home ideals. This new aspect of home life is, however, well worth consideration, even though it is unlikely that the pendulum will swing back to the old-fashioned standards, which have such great written charm, but which few people nowadays care to put into actual practice.

IT is a curious fact that while this changed conception—or rather this new development of the home life—is becoming quite universal, the modern home has been improved almost beyond comparison with the homes of our forefathers. It is true, there are still few rooms so altogether charming, restful and delightful as the good old Colonial room—the genuine article, if you please, not the modern imitation. For pure charm, thoroughly permeating in its effect, no modern rooms, as a whole, can compete with it. But the modern room is better adapted to modern needs, and the modern house, as a whole, is a much more habitable dwelling than the old house ever was or could be. Moreover, nothing is now spared to make the modern home as attractive as possible—neither expense nor effort is avoided to accomplish this end; and yet, strange as it appears, the tendency of modern home life is away from the house, and our pleasant modern apartments are seldom used for the quiet, restful purposes of home life.

NOTWITHSTANDING this there is no reason to look forward to the extinction of the house as a dwelling. If that condition arises it will not be from pure neglect of the house, but because, in the cities at least, the pressure of population will become so great that space can be had only for the most necessary apartments, and each person have, in short, but a small sleeping place, the whole of the day's life, both for work and for recreation, being passed elsewhere. Even this will be no new thing, for the splendid buildings erected in ancient Rome as places of public resort met an absolute need in giving the citizens a common meeting place and a common play place where much of the daily Roman life was spent. Things have changed greatly since those days, when now every laborer seeks to own his own home, and in many cases has it.

AMERICAN artists, as a class, do not form a highly respected portion of the community. The work they do contributes nothing to the physical necessities of mankind, and its intellectual value, counted as mental food, is not much considered. They are of a jealous and quarrelsome disposition, attaching unusual importance to minor things, working in a way that no one not an artist thinks laborious, doing pretty much as they please and when they please. They do not seem to be governed by the ordinary rules of life, and eke out a precarious existence in a way that few understand and appreciate. It is a significant fact that the most successful art exhibitions in America—those of the Pennsylvania Academy of the Fine Arts in Philadelphia—have been arranged and conducted by a layman; while the exhibitions in New York, which are entirely controlled by artists, are only important because they happen to be held in the metropolis. The single important thing the artists as a body have accomplished in New York has been the organization of the Fine Arts Federation, which was started by an architect, but which, representing all the art societies of the metropolis, has actually attained political importance by being designated in the city charter as the body to make nominations from which the Mayor shall select the appointed members of the Municipal Fine Arts Commission. Yet neither artistic merit nor achievement lay at the bottom of this, for at the organization of the Federation a certain group of societies, which had the word "art" in their title, were invited to form it, irrespective of the artistic achievements of its members or its own artistic worth. Things might be better managed now; but this is literally what happened when the Fine Arts Federation was organized about ten years ago.

PROF. J LAURENCE LAUGHLIN has performed a much-needed public service in his discussion of great fortunes in the Atlantic Monthly. The prejudice against large accumulations of wealth by those who have not accumulated it has been so pronounced and outspoken that some careful, thoughtful words on the subject have long been needed. Prof. Laughlin rightly recognizes these protests as a form of public clamor originating in an unthinking manner and developed with unthinking venom. His article, while not published in an organ likely to be read by the protestants against wealth, must do much good. His subject, in a nutshell, he says, is this: The indictment of all wealth without discrimination is folly; for large fortunes may be honorably won and honorably spent, fortunes honorably won may be dishonorably spent, and fortunes may be dishonorably won and dishonorably spent. This is a sane, cautious and sound statement of the case, and deserves the very widest circulation. In the course of his argument Prof. Laughlin cites two notable examples of the creation of large fortunes, both by the building of railroads. One is that of Baron Hirsch, who gained a large fortune by the building of railroads in southeastern Europe; the other is that of the first Vanderbilt, whose railroad building sagacity opened up connection between the Great Lakes and the Atlantic, and paved the way for further developments in the West. Prof. Laughlin rightly points out that if each of these railroad pioneers, both of whom ventured much in their enterprises, took out fifty or more millions each, they only did so because, at the same time, they created vast new wealth in the regions which they developed. This is a very clear statement of the origin of two great modern fortunes, and Prof. Laughlin cites other instances, which make evident the necessity of knowing what one is talking about before unfair and unjust criticism of wealth is indulged in. Much of this talk is pure envy and spite, and is only significant because it is heard on every side, and is as misleading as it is unwise. Prof. Laughlin's article must greatly help in bringing about a truer view of the case.

It is sound and wise in every particular, characterized by great good sense ably applied to a most important topic. It is not the less so because it emanates from a professor in the University of Chicago.

Notable American Homes

By Barr Ferree

"Woodcrest," the Estate of James W. Paul, Jr., Esq., Radnor, Pennsylvania

THE estate of Mr. Paul at Radnor is a property of about three hundred acres, situated in the center of the lovely rolling country which is characteristic of the land to the west of Philadelphia. It is a wonderful country that, a region of fine houses, of beautiful properties, of finely kept lawns, of highly cultivated lands, of delicious woods—a veritable park on a great scale, the dwellings for many miles amply spaced within superbly maintained grounds. It is a splendid and beautiful country, stretching for many miles on both sides of the "Main Line" of the Pennsylvania Railroad, and so conveniently and so numerously served by trains as to make it one of the most accessible, as it is one of the most charming, of suburban regions.

A quick turn in the road brings an illuminated corner into view, a high wall of roses and honeysuckles, brilliantly abloom. Just behind it is the entrance lodge, which one presently discovers to be designed in the same style of architecture as the house. The entrance driveway passes before it, and as one's carriage swings into the gate one realizes at once that this is an estate quite out of the ordinary. The fine macadam road stretches ahead indefinitely, with no view of the house as yet, nor for some little distance. To the left, as you leave the entrance, is a pool of water shining brightly in the finely kept lawn, and beyond are the roses and the honeysuckles, which line each side of the angle at the entrance corner.

Brilliant as this entrance is you forget it as the horses drive smartly along the entrance road. Vista after vista opens before one. There are trees everywhere, in twos and threes, in singles and in groups, rising from lawns that grow clear up to them. Splendid trees, too, straight as arrows and tall and lofty. Beyond are the woods, so thick and dense as to be forest-like in their effect; with all the underbrush left as Nature intended it to be, bordered, next the lawn, with row after row of rhododendrons planted in graceful curves, borders of rare brilliancy in the early spring, growing exactly where they will best grow, and adding many superb splashes of color to the many tones of green with which the landscape is bounded. Further on are rows of honeysuckles, and then roses, with more rhododendrons.

"Woodcrest"—The Great Hall

The carriage moves rapidly on; the drive makes many a graceful turn; the trees assume fresh combinations; the rhododendron borders continue their endless curves, and still no hint of the house. Had the approach been planned to enhance the size of the place, it could not have been better managed; but as a matter of fact the house has been placed

"Woodcrest"—The Terrace Front

"Woodcrest"—The Entrance and Courtyard

exactly where it seemed best to place it, and the length of the approaching driveway was determined quite without the effect it might have on the visitor.

Presently a row of thickly planted cedars comes into view, and above them are the gables of the house. The logical center of the property has now been reached. The ascent has been so gradual that one does not realize one has attained to a considerable elevation, an effect that is increased by the fact that the house and stable—the main entrance of the house stable directly facing the main entrance of the house, although both buildings are widely separated by spacious lawns—are built on a plateau, the land falling away only at some distance from the buildings.

The cedars, you presently discover, inclose the laundry yard and entirely surround the kitchen wing of the house; surround it so closely and so completely that scarce a hint of the uses of this part of the house is apparent. The first driveway leads to the kitchen door, a second to the main entrance, the center of the main wall, and is almost chapel-like in aspect, with slightly curved arches, gable end and buttresses.

Varied and interesting as this entrance front is, the architectural character of the house is best shown in the corresponding front on the other side, called the terrace front, although a terrace surrounds the house on every side except at the entrance. The scheme here is quite different, for the wings at either end are of stone in both stories, with half-timbered gables, with richly carved cornices of very dark wood. The central projection is of stone throughout, including the gable, and has an ornamental centerpiece, a round arched doorway below, with a carved band and lions below the great upper window, which has a fine architectural frame surmounted with a balustrade below the simpler windows in the gable. The connecting wall between this center and the wings is half-timber in the upper story, the larger windows cutting the roof and capped with pointed gables with carved wood hoods. Large and small dormers in the roof complete

"Woodcrest"—The Smoking-Room

and between the two, and on the side beyond, are many evergreens, beautiful little trees of every conceivable shape, size and color, growing with a lustiness that foreshadows a wonderful future.

The screen of cedars follows the kitchen wall so closely, around to the porte-cochère, that one wonders they keep their form and color; it is an introductory hint to the great care lavished on every tree and shrub of the estate that such results can be obtained in a situation which, if not unfavorable, is certainly not calculated to produce the best results. Thus through a forecourt of evergreens one reaches the house.

The porte-cochère is in an open courtyard, surrounded by the house on three sides. The main building is of stone, two stories in height, with a third story in the deeply sloping roof. The upper story of the wings is in half-timber work. In each inner corner is a square stone tower, surmounted by a low curved roof or dome. The porte-cochère is directly in the features of this front, which is at once varied and harmonious, stately and dignified.

And it is enlivened, beautified and completed by a most remarkable and superb collection of evergreens planted close around the terrace on all three sides. The terrace itself is inclosed within low evergreens, and below, on the hillside, is the splendid collection—numbering nearly one thousand three hundred trees—which are at once the special pride and delight of the owner and the chief plant distinction of the place. A wonderful mass of color it is, of greens and yellows of every possible shade, growing so closely together that there scarce seems room for a single tree more, and yet each growing finely, as though each had all the space in the world. At the steps, top and bottom, are pairs of English golden yews, a rare and unusual tree, growing luxuriantly and quite adapted to its new habitat. On the terrace are many bay trees, golden yews on each side of the main doorway, and

"Woodcrest"—A Glimpse of the Library

"Woodcrest"—The Dining-Room

the lower walls are thickly overgrown with vines, which, in time, no doubt will completely cover all the stonework.

Then within. The door at the porte-cochère opens immediately into the hall, an immense room, two stories in height, and extending clear through the house to the main door on the terrace. It is lined throughout with oak, the wall surfaces being divided into bays by paneled pilasters: single great arches below, two arches to a bay above. The lower arches are openings to corridors, or recesses, one of which contains a fireplace, and all large enough to serve as ingle-nooks. The upper arches inclose an ambulatory carried completely around the hall, adding vastly to the interest of the perspectives seen from below, as well as to the spaciousness of a room already large in its own proper dimensions. The beamed ceiling is dull red, with borders of brown; the ambulatory ceiling is of solid red. There is no central chandelier in the hall, which is lighted by side lights. The rug, which covers almost all of the floor, is green, and there is much green furniture. A great, carved table stands in the center, and pots and jars with growing plants are disposed in the corners and at the arches.

On each side of the hall the central bay opens into a passage, with an arched coffered ceiling, that leads to the other rooms. The walls are paneled throughout. These passages are necessarily dark in the daytime, since they receive light only from the ends and from the doors on the sides; but great globes of electric lights brilliantly illumine them at night and bring out admirably the well-studied detail with which they are finished. The passage to the left, as one enters from the porte-cochère, leads to the dining-room; the corresponding passage on the other side is the approach to the library.

The reception-room is to the right of the passage to the dining-room. The walls are hung with drab silk, with borders of darker hue, embroidered in flat colors. The wainscot is white wood, as well as the door frame. The curtains are the same material and color as the walls. The furniture is gilt with tapestry covering. The mantel is white marble. It is a small room, lighted by a large baywindow, but very soft and charming in color and in furnishing.

The dining-room and breakfast-room are practically one apartment, the latter being but an extension of the former. The dining-room opens directly from the passage from the hall, and being used only in the evenings is somewhat dark in comparison with the further portion set apart as a breakfast-room, and used also as a dining-room when the family is small. The woodwork is oak, the walls, hung with red damask, being divided into panels by pilasters, which support a shallow but richly carved frieze. The ceiling is of white plaster, with decorated ribs arranged in an interlacing design. The rug and curtains are red. The fireplace, of stone, is surmounted with an overmantel in relief. The andirons are of bronze carrying standing figures. The room is lighted by brackets applied to the pilasters, and a number of family portraits are hung against the walls. At one end is a superb French cabinet, with a portrait painted on the central panel, and containing a magnificent collection of rare old porcelain and glass. The breakfast-room is practically identical with the dining-room in treatment and in color, but the walls have no pilasters, and the more ample windows make it a much more brilliantly lighted apartment, and one entirely suited to its purpose. A window in the dining-room opens onto a side porch, spacious enough to be used as an outdoor room, and furnished accordingly. It affords many charming glimpses of the surrounding country.

From the dining-room a door and passage lead immediately to the serving-room and pantry, and connect with the kitchen and cellars. The kitchen wing is entirely given

"Woodcrest"—The Morning-Room

"Woodcrest"—The Breakfast-Room

up to the servants, both on this floor and above. Every possible convenience and device is here for the important work done in these rooms. A laundry is beyond the kitchen, and opens onto the clothes yard, which is so cleverly concealed by the screen of cedars noted in the approach to the house.

As for the cellars, they are seemingly without end. They contain passage after passage, room after room. There are wine cellars and an ice plant; a room for the storing of mineral waters; a battery of boilers for warming the house in winter, and a separate smaller boiler for supplying hot water in the summer months; there are spaces for the storage of wood and coal, and a separate handily placed space for the kitchen coal; there is a vegetable room, with bins for different kinds of vegetables, and another alcove where fresh vegetables are to be kept green and sweet immediately below an open window; there is a room for pressing clothes, and space for drying clothes when the weather will not permit them to be hung out of doors; there is a lavatory and bath-room for the men servants; there is a garbage closet, air-tight and wonderfully convenient. Every possible use that could be made of a cellar seems amply exemplified here, and on the largest possible scale.

Upstairs again for the rooms on the further side of the hall. The plan here is much the same as on the dining-room side. A morning-room opens from the connecting passage and corresponds in position with the reception-room already noted. The prevailing color is a light yellow brown, with walls, furniture and curtains of the same soft shade. The furniture is of white wood. Opposite it is the den, treated in green, the walls and curtains of green figured silk.

The library is a large room at the end of the connecting passage. The ceiling is coffered and richly decorated with geometrical and floral designs. The great stone chimney-piece is the largest in the house, and is elaborately detailed. The walls have a paneled wainscot, and are hung above with steel-blue velvet with a tapestry border. This color pervades the whole room, the rug, curtains and furniture being of a similar hue. Most of the wall space is surrounded with bookcases, and two great square cabinets are used for large folios. As with the dining-room, this room opens onto a spacious porch, furnished as an outer room. The further extension of the room is called the library alcove, and corresponds to the breakfast-room; it is furnished and designed in harmony with the library.

The billiard-room also opens from the library. It is paneled nearly to the ceiling, with a plain white strip above the cornice. The carpet is of steel-blue and the mantel of wood. Beyond it is the smoking-room, a step higher than the billiard-room and with a slightly lower ceiling. The walls are here completely paneled, and the richly designed ceiling is similar to that of the billiard-room. The curtains are of a tapestry material with a flowered design in red and brown. At the further end is a chimney and ingle-nook; a carved clock is placed in the recess above the mantel.

The second floor is almost of as much interest as the first. There are no show apartments here, but a beautiful series of bedrooms and bathrooms; the former furnished, in each case, in a distinctive color and decorated in good, quiet taste. Mr. Paul's bedroom is prefaced with a study in blue: a rich carpet of a deep hue, walls of a lighter tone and blue furniture. The bedroom, which contains an antique four-poster bed, is finished with flowered tapestry with light fawn background. There are rooms for the family and for guests on this floor, and further guest rooms on the third floor.

An estate so large as this can not be properly inspected afoot, and presently I was placed in a cart for the further viewing of the domain. How long the drives are through the property I do not know, but they are extensive enough to give the impression of an estate of great size, and fine enough to amply demonstrate the thorough care with which it has been developed. Much of the land adjoining the house is heavily wooded, and the underbrush has been retained with

as much care as has been displayed in the planting deliberately undertaken. There is, therefore, a very unusual sense of wildness in these grounds that adds greatly to their beauty.

Quite in the woods is the power house, where the engines are tended day and night by competent engineers. Just outside is the receiving tank for the water pumped from artesian wells by compressed air; steam pumps then convey it to the reservoir, placed on high land some distance away, a reservoir lined with white enamel brick and filled with so pure a seeming water that a quenchless thirst might be engendered by it, were such sensations produced by the sight of water. Not far from the power house—whose apparatus includes the pump for the ice plant in the cellar of the house—is the swimming tank. It is closely veiled with a high hedge of roses and honeysuckles, so luxurious in their growth as to be practically impenetrable. A bathhouse within the inclosure completes the conveniences of this place.

The property is so large that each department of the estate has a site of its own entirely removed from every other part. Down below the house stable are the greenhouses, a group of three great structures connected with inclosed passages, and containing a vast assortment of treasures—orchids, begonias, roses for winter blooming, chrysanthemums, cacti, ferns, palms, foliage plants and show plants of every description; it might be easier to set down what is not here rather than what is, so varied are the contents of these buildings and so complete and so apparent the care lavished upon them.

The unusual feature of the greenhouses, however, is their proximity to the flower garden, which is of great extent and of charming variety. Large beds of flowers surround the greenhouses, and beyond is a circle of water, toward which the flower beds descend in radial lines. The beauty here, the color, the plants, are quite indescribable, so profuse is the blooming, so great the variety, so fine the growing, so splendid the effect. One does not see this splendor from the house; but once here one may wander for hours amid the brilliant flowering and feast one's eyes on what seems to be —and perhaps is—every sort of blooming plant. A long walk, bordered with wide flower beds, leads to a pergola placed under the trees. A sun dial stands at a cross path; and just before the pergola is a pool, whose water jets form graceful fountains at the spot where the cultivated flower garden is merged into the primeval woods.

Further off is the truck farm, bordered with flowers, and with blooming plants grown in rows for household use. Close at hand is the reservoir, of which mention has already been made, surrounded, as are most of the special places on this magnificent estate, with flowers, chiefly roses.

The farm, for of course farming operations are carried on on a large scale, is quite distinct from the other parts of the estate. This is entirely complete and fully isolated. The buildings are large and ample, but unpretentious in style, as befits a true farming community. The stone house for the farmer, however, is almost a mansion, built in the style of the old houses that abound in this region and containing accommodations for the farm laborers who are boarded in it.

The mere enumeration of the farm buildings must suffice; this alone is sufficient to indicate their extent. There is a vast barn, built against the hillside, so that the hay can be taken directly into the lofts and the wagons and large tools stored there. Below, and entered from the other side, is the horse stable, the upper story overhanging an open external passage. Here are the farm horses, comfortably stalled, each horse with his name above his stall. Then there is a cow house, the names and pedigree of each cow being duly marked above her place. The heifers are kept in a separate house, two or three in a box stall. In a wing is a house for the sheep in winter, and a sheep yard heavily stockaded as a protection against dogs. There is a corn crib

"Woodcrest"—The Reception-Room

"Woodcrest"—The Pool in the Garden

"Woodcrest"—The South Terrace

and pig house, an artificial spring house or dairy, chicken houses and chicken runs, and finally a pheasant yard in the near-by woods. All beautifully clean, if you will please to note, the stalls thoroughly washed out every morning, and the passages and stalls covered with thin shavings, which are renewed daily.

One emerges from the farm buildings in a somewhat dazed frame of mind, so numerous are they, so perfectly kept, so manifestly convenient, so entirely equipped with everything that could possibly be needed. Yet there is the house stable yet to see, the largest single building on the estate save the dwelling house, and so near to it that it might well have been visited first as last.

It is a beautiful, half-timbered structure, stone and stucco below, half-timber above. It surrounds three sides of a great open paved courtyard, apparently large enough to drill a regiment in. On the entrance side the courtyard is inclosed within a wall, with a gateway in the center. On each end of the wings, and opening directly onto the grounds of the estate, is a dwelling house; the coachman lives in one, the superintendent in the other. Although structurally part of the stable buildings, they are charming bits of architectural composition, with gabled roofs.

The long wings behind them are put to various uses and are variously treated. The upper story completely overhangs in some parts; in others the lower story is put into practical service. At one place is a billiard-room for the men, at another a tool house; there is ample and sufficient storeroom for every possible purpose; and at the back, stretching full across the court and bounding it, is the house stable, with its carriage house and horse stable, and again everything that appertains to the intelligent care of horses.

Unduly extended as this description of this estate must seem, it quite fails to do complete justice either to its great beauty or to the very ample way in which it is developed in all its parts. Its size alone would entitle it to consideration; the variety of its departments would excite interest, the care with which every part of it is kept up win admiration; while the beauty and extent of its buildings would arouse enthusiasm. Ably developed as every aspect of it is, the final result, the estate as a whole, is a place of absorbing interest.

And everything here is well managed and well done. A large body of men are needed to keep the estate in order, to make the repairs, to keep each department going, to man the permanent works. Of the necessities of life light alone is obtained from without. The extensive private pumping plant and reservoir have already been described; that the great house is heated from its own boilers in its cellar has been noted; but electricity is not generated on the property, and for that alone it is dependent upon external supplies.

Still one further characteristic may be referred to, and that is the broad differentiation that exists between the buildings of the house—the house and house stable—and those concerned with the farming end of the estate. The farmhouse is indeed a dwelling of much interest, but the farm buildings and the other minor buildings on the property, while all especially designed and built for their present purpose, are modest in design and quite without architectural pretense. They are work buildings, not show buildings, and best serve their ends in the simple forms given to them.

As a matter of record it should be added that Mr. Horace Trumbauer, of Philadelphia, was the architect of the house and stable; that the flower gardens near the conservatories owe their design to Mr. Ogelsby Paul, landscape architect; and that the whole place has been brought to its present state of fine maturity largely through the painstaking care of Mr. Hurley, its superintendent, almost from the beginning, four years ago. It is an estate so full of interest and so finely matured that it might well have been many more years in the making.

"Woodcrest"—The House Stable

The Residence of S. S. Dennis, Esq.

Morristown, New Jersey

THE residence of S. S. Dennis, Esq., of Morristown, N. J., is constructed in the Georgian style, of Harvard brick, with white marble and wood trimmings. All the woodwork is painted a pure white. The roof is gambrel in form, and is covered with shingles and left to weather finish a natural silver-gray color. The design is similar in many respects to other houses of this character, but differs from them in that the exterior architectural detail is more in accordance with the Georgian period and is more solid and massive in character.

The entrance is into a central hall, which is trimmed with white pine and treated with white enamel. It has massive paneled wainscoting and a wooden cornice. The open fireplace has facing and hearth of tile and a mantel of classic design. This fireplace is recessed in a baywindow, and on either side is a window, beneath which is a paneled seat. The butler's pantry is fitted with drawers, dressers and cupboard, sink, etc.

The kitchen and its dependencies are fitted up in a first-class manner with all the best modern conveniences. The rear hall contains an elevator, around which the rear stairs rise to the second story. The servants' hall is placed at the rear of the extension, and is lighted and ventilated on three sides of the room.

The second story is furnished with white enamel trim and

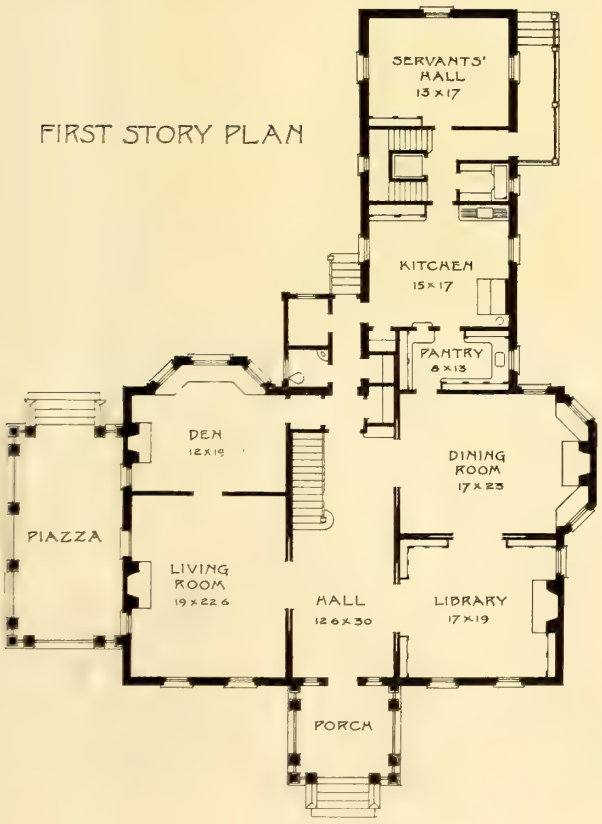
The Staircase

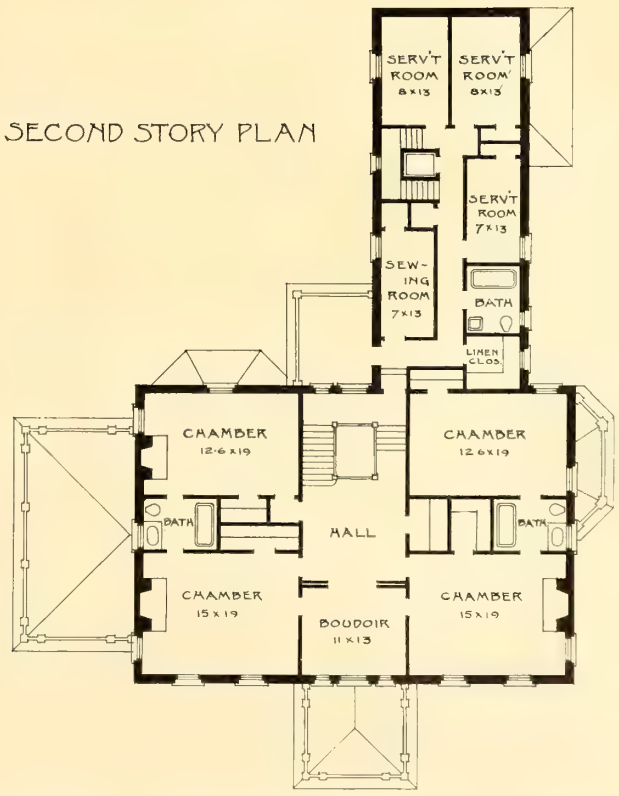
door and window casings. The walls are covered with crimson burlap. The staircase is of an ornamental character, with painted balusters and newel posts and mahogany rail. The living-room, which is placed to the left of the hall, opens directly on the piazza, and is also treated with white enamel, and is provided with a massive frieze. It has a broad, open fireplace with marble facings, and hearth and mantel.

The library is trimmed with pine and treated with white enamel. The walls are crimson and finished with a massive wooden cornice. Bookcases are built in, extending around the room, and are furnished with doors glazed with leaded glass. The open fireplace is built of glazed brick, with the facings and hearth of the same, and a mantel of Colonial style. The dining-room is trimmed with oak, and has a mahogany doors. This floor contains four bedrooms, two bathrooms and a large, open hall, with a boudoir at the front, separated from the hall by sliding doors and connecting with each of the front bedrooms. The bathrooms are fitted up with porcelain fixtures of the highest grade and open plumbing of nickelplate.

The third floor contains a large children's playroom, together with the guest rooms and children's room. The servant quarters are isolated from the main part of the second story by being placed in the extension. There are four servants' rooms and bath, which are fitted up complete. The cellar, cemented, contains the heating apparatus, fuel rooms, laundry, cold storage, etc.

Mr. J. M. A. Darrach, architect, 1133 Broadway, New York.





The Residence of S. S. Dennis, Esq., Morristown, New Jersey

The Library

The Dining-Room

The Residence of S. S. Dennis, Esq., Morristown, New Jersey

A Successful Small Suburban House

Englewood, New Jersey

AMERICANS of modest means have at last found out that it is quite possible to produce, with a little care and thought, an attractive house of small dimensions and small cost, as has been demonstrated by the artistic house illustrated herewith, and which was built for Aymar Embury 2d, at Englewood, N. J.

In selecting the design for the house it was thought best, since the original settlers of what is now called Englewood were Dutch, that a design of semi-Dutch architecture be adopted.

The house, as will be seen from the illustrations, was carried out on these lines; it is constructed of stucco of a soft grayish color for the first story, and shingles for the second story, while the whole is crowned with a Dutch roof covered with shingles, which are stained with a mossy green effect. The shingles in the second story, which are painted, are laid wide, as the old Dutch shingles were made, and which produce a much more satisfactory result than having the shingles laid closer together, as is usually the case. The piazza has a floor paved with Dutch unglazed tile, and the roof is supported on massive stucco columns.

The plan called for a large living-room, dining-room and kitchen on the first floor, with a goodly number of rooms and bath on the second. As a house of this size only required the services of one maid, a butler's pantry was considered superfluous, and from practice it has been found much more convenient to do without the pantry, and to have the maid bring the dishes directly to and from the kitchen.

The entrance is into a small hall, from which rises an interesting staircase of excellent design. The small seat beside the stairway is a good feature. The walls are wainscoted and the ceiling is beamed. The living-room extends from one end of the house to the other, insuring good light and ventilation. The extreme rear of the room is provided with a large open fireplace, furnished with facings and hearth of Harvard brick, and a mantel of good design; the left side and front are pierced with a cluster of windows, and the right hand side of the room is taken up partly with a bookcase built in, partly by a screened wall for the staircase, while the remaining space is occupied by the opening into the hall. This living-room has walls covered with crimson burlap, and the whole finished with a wooden cornice. The ceiling is beamed. This room, as well as the remainder of the house, is trimmed with North Carolina pine and stained a Flemish brown. This North Carolina pine takes the stain beautifully, and when stained in wax, as in this case, a color and graining of such fine quality is produced that it is quite equal, if not superior, to oak, and at the same time very much less expensive. The room as a completed whole is very artistic, and with the floor covered with many richly colored rugs, and furnished with the plain, simple furniture of the mission character, is all that can be desired.

The Living-Room

The dining-room is finished and treated much as the living-room, except that the general tone and scheme is of Indian character. The walls are covered with an Indian paper of very rich design and color, and this is enhanced by the beautiful Indian lantern which is suspended over the dining table.

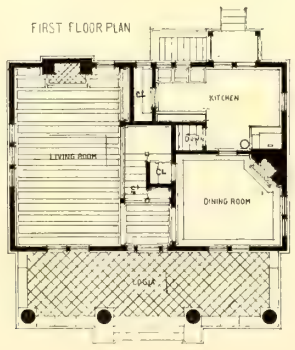
The House of Aymar Embury 2d, Esq., Englewood, New Jersey

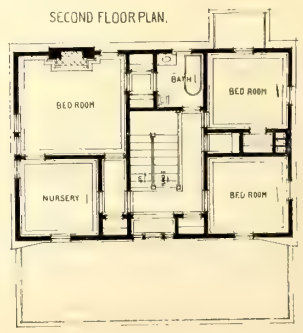
A fireplace was desired in this room, so one was placed in the corner, as is shown in the illustration, and as both the kitchen and dining-room are closely related one chimney suffices for both rooms.

The kitchen, opening from the dining-room, is very compact in form, and has a range placed on a slate hearth in the corner of the kitchen and against a glazed brick chimney breast, a large pantry, a dresser, a porcelain sink and wash trays. The inclosed porch at the rear of the house forms ample space for the ice-box, making it equally as cool a place in summer as in winter.

The second floor is planned with a view to utilizing every possible bit of space. A study of the plan will reveal the fact that for a house of this size a large amount of room has been obtained on this floor. The owner has a large room, with open fireplace provided with tiled facing, and hearth and mantel. Connecting with this room is the nursery at the front, and at the side a lobby containing two large well-fitted closets forms an entrance to the bathroom, which is wainscoted with tile and furnished with porcelain fixtures and exposed nickelplated plumbing. This bathroom has another entrance from the hall. This floor also contains two guest rooms, linen closet, etc.

Stairs rise up over the lower stairway to the attic, which contains the maid's room and trunk room. The cellar, cemented, is provided with the heating apparatus, fuel rooms, etc.





The house is, in all small appliances, as perfect as it has been possible to make it, and great care has been given to the hardware, registers, light fixtures, etc., in order to have them match the color schemes, and were well thought out before the woodwork was stained or the decorations were undertaken.

Mr. Aymar Embury 2d, architect, Englewood, N. J.

The Staircase

The Dining-Room

The House of Aymar Embury 2d, Esq., Englewood, New Jersey

"Mission" House of Evarts Tracy, Esq.

Plainfield, New Jersey

ONE of the most interesting types of the modern house being built at the present time is the "mission" house illustrated by the dwelling built for Evarts Tracy, Esq., at Plainfield, N. J.

The exterior walls, from the grade to the roof line, are built of brick, the whole of which is covered with a cement stucco, which is treated with a wash presenting a pure white tone, which harmonizes perfectly with the brilliant red of the Spanish tile roof, which surmounts the whole, and the Italian green painted blinds. The house is placed in the center of a grove of pines, and the setting is most harmonious and attractive.

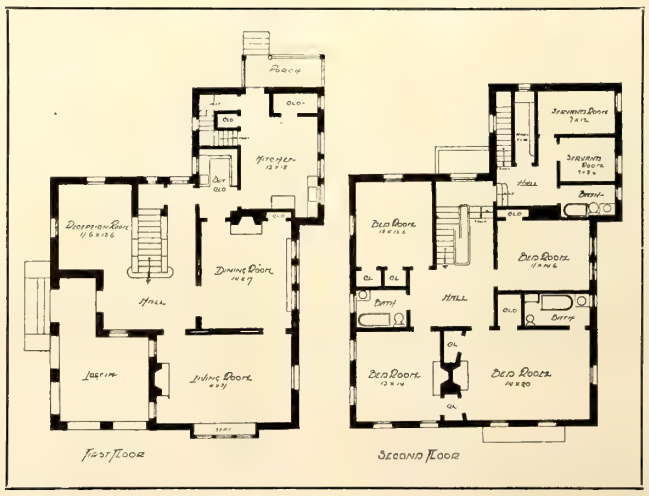
It has a paneled wainscoting and an open fireplace with brick facings and hearth, and a quaint mantel.

The dining-room is trimmed with chestnut, and is finished in a soft brown color of Flemish tone. The fireplace has a facing of cement and a hearth of red tile. There is a very attractive little mantel, with shelf supported on corbels, and a paneled overmantel, above which there is a plate rack. On either side of the space, occupying this end of the room, are two doorways, with circular heads, one of which forms the entrance to the china closet and the other to the butler's pantry.

The kitchen and its dependencies are trimmed with North Carolina pine, and each are furnished with the best modern conveniences.

The entrance is into a square hall, from which rise the stairs to the second story. The hall and reception-room are trimmed and finished in forest green, with the side walls finished with a dull green burlap. The ceiling is covered with massive beams. The stairs are a box stairway with a balustrade, and platform for bric-à-brac, etc.

The living-room is a very attractive apartment, and is trimmed with chestnut. The walls are covered with crimson burlap.



The second floor is trimmed with pine, and is treated with white enamel. It contains four large bedrooms and two bathrooms, besides two servant rooms and a bath over the kitchen, with private stairs to the kitchen. The bathrooms are fitted with porcelain fixtures and exposed nickeltains storage space, and the cellar plated plumbing. The attic con- a laundry, heaters, etc.

Messrs. Tracy & Swartwout, architects, 156 Fifth Avenue, New York.

The Dining-Room

Another View of the House

The House of Evarts Tracy, Esq., Plainfield, New Jersey

A House at Woodmere

Long Island

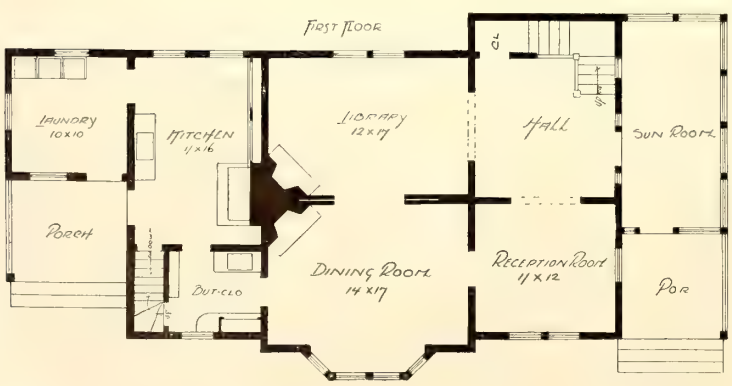
THE house at Woodmere, Long Island, illustrated on this page, was built for the Woodmere Land Association, of which Mr. R. L. Burton is the owner.

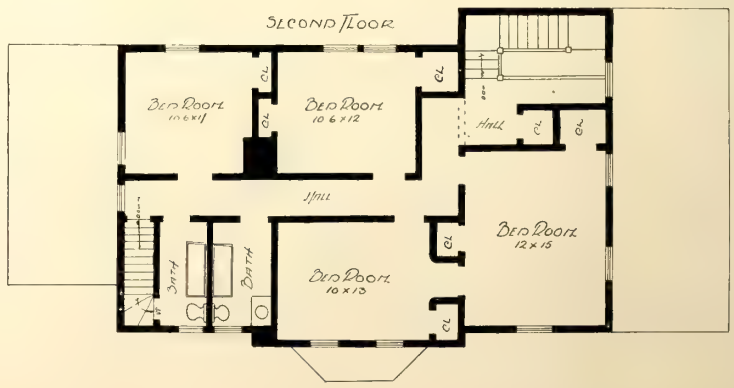
The underpinning is built of red brick, laid in red mortar. The superstructure, of wood, is covered with matched sheathing, good building paper and then shingles, which are painted white. The roof is also covered with shingles, and is left to weather finish.

The interior throughout is trimmed with white pine, and is treated with ivory-white paint. The hall contains an ornamental staircase, with white enamel balusters and newel and mahogany rail. The reception-room is treated in an artistic manner. The library and dining-room are separated by double sliding doors, and each have open fireplaces furnished with red brick facings, and hearth and mantels of good design in the Colonial style. The kitchen, butler's pantry and laundry are fitted up with all the best modern conveniences.

The second story contains four bedrooms and two bathrooms, the latter furnished with porcelain fixtures and exposed nickelplated plumbing. There are three bedrooms and ample storage space on the third floor. The cellar, cemented, contains the heating apparatus and cold storage.

Mr. Frank Cotter, architect, Woodmere, Long Island.





A House at Woodmere, Long Island

Helps to Home Building

Living in the House

OF COURSE, that is what the house is for! Very true; but does every one get the most out of the house he lives in? Does every one value the house as a house? Is the house itself a part of one's life, to be enjoyed as one might enjoy a rich carpet or a cherished vase? These are pertinent questions, because until they can be answered in the affirmative the house and its equipment must fail in having real and genuine interest even to those who have spent of their money in its building and their time and energy in its equipment. Without this interest—a living, broadening, permanent interest—the building of houses will be an exotic art, quite apart from the realities of life.

Yet houses are built to live in, and no element in civilization is more helpful on the one hand, or, in some instances, more detrimental on the other. No argument is needed for the cause of good houses. One need not, unfortunately, be a good man because one lives in a good house; but the better life is spent in the better surroundings. The greatest dangers to our social fabric do not come from our good houses, but from the hovels and tenements, which still too often deface our civilization and our humanity.

A good house, therefore, is a good thing. It is not only good in itself, but it is capable of helping its occupants by the interest they may take in it. And this is the key to progress in household art. One should be interested in houses, and especially in one's own house, exactly as one is interested in other objects, animate and inanimate, with which one is surrounded. History hardly points the time when man did without dwellings constructed by himself and for his own use. Like the poor, they are always with us, and seem destined to be always with us. They are absolutely indispensable. They cost large sums of money. They help, and very materially help, in adding to the joys of living. Yet there is little real interest in houses as houses.

In the last few years a very astonishing interest has been developed in the subject of automobiling. This interest is not only phenomenal, but very great and very general. It exists among people who can never hope to own one, and who, perhaps, may never take a ride in one. It is an interest well-nigh universal. And it has been created in a few years. It is a subject so new that we can not yet begin to see its probable influence on the weighty subject of transportation.

The contrast between the interest in houses and the interest in automobiling is very pronounced. On the one hand we have an indispensable subject, a subject that, in an offhand, general, indifferent way, it is admitted has an important bearing on human life and the spread of civilization. On the other we have a luxurious sport, actually open only to the very rich, in which every one, rich and poor alike, is interested. It is a strange and singular phenomenon.

No doubt many causes tend to produce this indifference toward houses; but certainly one of the most potent causes is that people generally do not understand how to get the most out of a house. They look upon a house as a place to live in, not as a positive influence in their lives.

A first step forward is to view the house as a social element. Many things help in this. A pleasant looking house pleasantly situated has obvious advantages over an unpleasant house unpleasantly situated. This is a basic condition now very generally recognized in suburban development, and it is not the less marked because not a few of the efforts in this direction are altogether helpless and hopeless. But the value of such things is so generally admitted that it is evident some progress has been made.

The external aspect of the house is regarded as the first factor in its appreciation. And this is so near the truth that the sale of an ugly house is almost impossible, and its occupancy a matter of constant regret to its unfortunate occupants. But the value of good looks in a house is very far from being properly understood. That the house should be good looking is very generally admitted; but the standard of good looks in a house! It simply does not exist. Even on this very obvious point, therefore, there is much missionary work to be done.

But does the outward aspect of the house affect the personality of the inmates? Assuredly. It is not fair to judge the inmates by the exterior, especially in houses of moderate cost, for it is impossible to draw general conclusions as to why a particular house was chosen. Very likely it was not built by the occupant; it may have been the only house available in its location; it may have been the only house that could be had for the sum at command. But, apart from these considerations, the exterior of the house has an influence on the inmates by stimulating pride in it. Even if one knows nothing of the absolute value of good looks in houses one naturally takes more pride in a dwelling that seems, to the happy occupant, to be better looking than those of his neighbors. A healthy rivalry in exterior aspects is thus created which, while it may not stimulate the inmates to better seeming homes, will tend to raise the standard of the whole community.

The interior of the house has a much more individual value and character. One may not be willing to assume the entire responsibility for the outside of one's house; but one can not avoid doing so for the interior. The color of the walls, the style and character of the furniture, the form of floor covering, the pictures, ornaments, bed coverings and dishes—all these are the signs, and the incontrovertible signs, of the inmates' personal tastes, inclination and knowledge.

If the outside of the house should be attractive it is vastly more important that the inside should be as charming and as delightful as it is possible to make it. And this charm-giving quality is never finally established, even in the most fascinating of houses. No interior of a rightly appreciated home is ever complete. The charm may, indeed, be definite and thoroughly established, but the effort to add to it, to make it more charming, should never cease.

And the more one does to a house the more one becomes interested in it. This is the real secret, if it be a secret, of getting the best out of the house, and of realizing to the full its livable qualities.

The house should be enjoyed in its parts. If the rooms are pleasant in themselves—bare and unfurnished—they must be made pleasanter by pleasant furnishings and charming arrangements. If they are awkward and unsatisfactory, there is the greater need for the exercise of finer care in their interior treatment.

The charm of a well designed, well furnished, well maintained, well planned house is very great. It is a real and penetrating charm, elevating to its inmates and not less delightful to the casual visitor. The latter, indeed, is a person seldom to be considered, yet too often thought too much of. The house is for its inmates, and it remains with them to get the most out of it.

The Autumn Bulb Planting

By Leonard Gilbert

THE spring garden is very largely a bulb garden. All that is delightful in it is the result of planning the year beforehand. Next year, when neighboring lawns are bright with color, it will be too late to demand of the florist ready-made, outdoor effects in snowdrops and hyacinths. In beds newly spaded and mellowed we plant many brown and white bulbs this month. Let us plant thickly, that their blooming may be riotous and really springlike; tastefully, that the effect may not be barbaric. Mixed bulbs are cheap, but their effect is even cheaper. With known colors or named varieties we can plant intelligently and produce brilliant results.

Attractive Effect Produced by the Unsymmetrical Planting Around a Fountain

Perhaps it was the stiff, prim habit of the Dutch bulbs which suggested and kept in use for them so long the formal pattern beds in stars and circles and curlicues. Happily these are now vanishing into the irregular, wavy lines used to border walks, into naturalized masses and colonies, into old-fashioned borders along beds of perennials. Often these bright spring flowers are effective in emphasizing some natural feature of the place, as when outlining a broken mass of boulders, some steep slope or rocky ledge.

Since, in most cases, bulbs planted near the house are to be followed by other plants in summer, we plan to have the flowers of a colony open simultaneously, selecting sorts that bloom naturally about the same time. The bulbs should be near the same size and planted nearly the same depth. The deeper a bulb is planted the later it will bloom. Yet most bulbs are planted too shallow for their well-being and well-continuing. Unevenness or succession of bloom is a good feature of colonies naturalized in the edges of woodlands; but where the bloom of the bulbs is to be succeeded by relays of other flowers, changes must be immediate and sweeping. Patchiness of bloom can usually be avoided by carefully choosing and planting.

To a naturally sandy soil it is necessary to add merely a little old, flaky leaf mold in order to make it congenial to bulbs. Extra fertility is best supplied in the form of a mulch of manure scattered over the beds after their surface has stiffened with frost once or twice. Drainage must be good, or water will collect about the bulbs in winter and cause them to decay. If the center of the beds is slightly rounded up toward the middle, after the bulbs are planted, it will help toward shedding the winter rains.

To clayey soils in which bulbs are to be planted some sand is usually added. If they are firmly bedded in cushions or layers of it, with more added atop, until their shapes are entirely covered, they will keep sound and bloom well much longer than bulbs carelessly thrust into unprepared beds with a dibble or trowel. An inflexible rule in the culture of all bulbs is that no fresh manure should ever be spaded into the soil in which they grow. If trowel or dibble is used in

planting more than the usual care should be taken to see that the bulbs are planted at even depths, if they are expected to bloom all together.

On large estates, where bulbs are naturalized by tens of thousands in irregular masses, this evenness of bloom is not so important as on small city and suburban lots. Small bulbs scattered over lawns are not really "naturalized" unless arranged in natural looking groups. Circular groups, colonies scattered at regular intervals over the entire surface of a lawn and all colonies that do not fit their situation, are bad. Irregularly shaped plantings, longer than their breadth, and that chime in well with their surroundings, are in best taste. The centers of the groups should be the most thickly planted, with edges spreading thinly into the grass. Scilla Siberica and snowdrops bloom near together and form a pretty blue and white effect. They will hold their own for years in the grass of a closely shaven lawn, frequently dotting it with flowers the last week in March. Crocuses planted in close-mown lawns need to be renewed every two or three years. They do not ripen their foliage so early as the snowdrops and scillas.

Glory of the Early Spring—A Tasteful Planting of Hyacinths

Snowdrops, with flowers uncut, form large, heavy seed pods that weigh their slender stems to the ground. When the capsules turn yellow we sometimes bury them where they have fallen, and the next year little plants spring up. Snowflake and snowdrop are not the same plant, as some people imagine. The snowflake has a smaller flower than the snowdrop, and thinner, paler green foliage.

The daffodils and narcissi, of various sorts, are among the best of all bulbs for naturalizing. They bloom very early, with the magnolias, and help to form one of the most delightful flower seasons of the year. Two of the prettiest sorts, poeticus and its double form, like drier ground than the others. Most of the sturdier narcissi, like Golden Spur, Princeps, Sir Watkin, Orange Phœnix and Trumpet Major, increase rapidly, soon thickening up their colonies into masses of white and gold.

It is possible, also, to naturalize tulips and hyacinths in woodland or waste places, where the soil is sandy or flaky, with old leaf mold. For this purpose we use principally bulbs that have been forced in winter, and do not expect them to make a great show until they have been planted for two or three years.

The Arrangement of Cut Flowers

THAT the arrangement of cut flowers for the house should be an art, highly developed and specialized, requiring many years of practice for its perfecting and a keenly developed taste, is an idea that strikes the Western mind as something incomprehensible, a needless task, a waste of energy. Fortunately for the development of Western floral taste, this is no longer regarded as useless study or needless effort. Acquaintanceship with Japan and with things Japanese has brought no more lovely knowledge to the West than the wonderful insight of the Japanese into the art of floral arrangement.

The Western idea may be broadly stated as simply putting flowers into any convenient receptacle. The Japanese idea is to use a flower as a decoration, as something to decorate a room with, to give it life and vitality, and to give these things in the most artistic and direct way possible. The difference between the two ideas is as broad as the ocean which separates America from Japan. But we are learning the lessons taught by the Japanese in floral arrangement, and we are learning them faster every day.

But the Japanese puts no speed into his work. The arrangement of a group of flowers with him is a matter of profound study. Every possible aspect of the disposition of the flower must be studied and its final destination considered before the task can be adjudged complete. There is, of course, a great difference between Japanese and American rooms which is quite fundamental. The Japanese room contains almost no furniture; it is, to Western minds, very bare. The American room is often chiefly furniture, so ponderously is it filled with tables and chairs, so thickly are its walls hung with pictures and prints. A single vase of flowers, in the simply appointed Japanese room, counts for a great deal more than it would in an American apartment. In the former, it may be the one chief object of beauty; it will be just as beautiful in the American room, but its beauty must stand competition with a multitude of objects that bear no relation to it.

A few simple statements will make clear some of the elementary principles of the arrangement of cut flowers. Flowers of one kind only should be placed in a single vessel. Try the separated and the compound methods, and the value of the former will be indisputably established. So true is this that often the best effect can only be obtained when flowers of a single color are placed together. Another excellent rule is not to crowd too many flowers into a single receptacle. The most beautiful will lose much of their charm if so arranged.

How a Valueless Suburban Place was Converted into a Productive Estate

By S. L. de Fabry

MANY owners of small country or suburban estates find themselves with a few acres of surplus land for which they have no use, except that they are a source of expense to maintain in harmony with the surroundings and well-laid-out grounds near the house. To own a country place as a summer residence is expensive, and only the wealthy can afford this luxury. A few acres nicely situated in communicating distance to the city is within the reach of the man with a moderate income, and I think the ideal of the simple life, as it is not only healthful and invigorating, but diverts the mind from the monotony and strenuous efforts of business to the varied pleasures of outdoor life and creates an interest in the average man for nature and its workings. In the following the evolution of a small country seat into a self-supporting estate is described, the feature of interest being that the owner had not the slightest knowledge of agriculture at the time the place came into his possession.

A Modest Cottage on Top of a Hill Surrounded by Two Acres of Old Shade Trees, Lawn, and Shrubbery, Laid Out Like a Miniature Park

The success obtained seemed the result of close study of the situation, facing all disappointments by renewed and better effort, until the results were satisfactory. The place consisted of fifteen acres, beautifully located on rolling land near the seashore, close to the city. The modest cottage, on top of a hill, is surrounded by two acres of old shade, lawn and shrubbery, laid out like a miniature park.

In outbuildings there were at that time a nice barn, carriage house, horse and cow stalls and a thirty-foot hothouse. The price paid for the place was reasonable, considering its almost suburban location and convenience. As an investment for returns it was valueless. The owner was not prepared to keep a summer home and a city residence, and therefore decided to make the place his permanent home and try to get some returns out of the thirteen acres available to cultivation. Being ignorant of the ways of agriculture, the services of an expert in this line were engaged.

Slowly but surely the transformation began. One nice day I was led through a bewildering array of plants, planted in rows and hills. There were cabbage, turnips, beets and sweet corn, flanked by beans, peas and parsley. Tomato patches were bordered with something crawling, which proved to be squash.

Soon hoeing time came. Additional labor had to be engaged to keep the weeds down. Everything looked lovely, and the writer commenced to figure on "the lowest estimate" which the crops would bring.

That summer we had unusually dry weather. One morning I noticed a field of green peas in full bloom getting yellow on the stems near the ground. My suspicions were aroused. I examined the blossoms, and found them full of little green bugs sucking the sap out of the plants. There were no green peas to market that summer. The beans, wax and green podded, "stood well," I was told. The trouble must have been that their standing must have been good with everybody else. After shipping a week or so to a commission merchant, I found out that after deducting gathering, baskets, freights and commissions, I had lost five cents on every basket shipped.

The Orchard Beginning to Bloom

Spring Plowing

A Field of Bush Lima Beans as a Second Crop

The tomatoes also proved a fine crop. The only difference here was that they were a "little late," and I lost seven instead of five cents on every crate. I commenced to hate "fine crops"; I was looking for something not so bountiful. Several thousand plants of late cabbage were set out. The cabbage worm, not I, got the crop. The worst were the sympathetic inquiries of my city friends. It was really aggravating. That fall I dispensed with the expert's services. In his stead, an unassuming individual, who could handle a plow and cultivator, was engaged for less wages, but strict orders to follow instructions. No advice but obedience was wanted.

Profiting by my experience, I concluded, to be successful, I must learn myself. The first consideration was my limited space, and quite logically I decided to grow for quality, not quantity. To produce something better than the ordinary was the aim, and in this to receive a better price the point. Having fixed in my mind what I was to grow, I spent considerable spare time that winter with books. I soon found out they treat the subject "too lengthy" for an amateur to grasp. Articles on special culture, such as appear frequently in this magazine, were of most benefit to me. They are easily comprehended and can be referred to when wanted. Insectides and fungous diseases were absorbed. Their theory is far from practice. Culture and to keep troublesome insects in check are necessary, but they do not produce results beyond the ordinary. To obtain these, one must know the necessary application which constitutes "intensive" culture.

The plant food supplied each individual specie must be far in excess as supplied by the ordinary grower, thus obtaining more in size, flavor and productiveness than he. Starting with proper soil preparation, the supply of nitrogen, phosphoric acid and potash must be applied in such proportions as to stimulate the entire energy of the plant to the utmost vigor.

The next spring the thirteen acres were laid out in the following manner:

Eight acres were devoted to vegetables.

One acre (alongside a brook) seeded in a permanent pasture.

Four acres planted out in a mixed orchard. In young fruit trees, only carefully selected stock of extra quality was considered. They were set out:

Spraying the Trees in the Orchard

Peaches: Wheatland, Elberta, Triumph.

Japanese plums: Satsuma, Wickson, Burbank, Abundance, Simoni.

European plums: Claude de Bavay.

Prunes: German and Hungarian.

Pears: Anjou, Angouleme, Bartlett.

Trees were set out eighteen to twenty feet apart, correctly trimmed back. All thrived. Leguminous crops, such as bush beans and peas, were planted between the trees the first three years, and after gathered in, plowed under green, the humus so obtained and nitrogen made available forcing the building up of the wood structure. Peaches treated this way showed a yearly growth from three to three and one-half feet. They were carefully sprayed, cut back and thinned out to proper crown formation. Every spring peach trees, at their first bearing, were thinned out by hand to one hundred and twenty-five peaches per tree, allowing fifty more for each year. Result, twice the size ordinarily obtained.

Plum and pear trees received the same attention. Care was taken at planting time to set out the trees in alternate rows, so as to obtain perfect fruit blossom pollenization. Between some pears and plums the ground was used to plant a large strawberry. At the first crop the size was found satisfactory, but not the flavor. Seeds of the small but highly flavored German forest berry were imported, plants grown from them and set out in the beds. Through the cross-breeding the size was retained and the flavor so improved that as much as thirty-five cents per quart for "fancies" was obtained.

In vegetables three acres of one-year-old Palmetto roots of asparagus were planted; rows six feet apart, stools three feet in the row. They were put under "intensive" cultivation. Between the rows, for two years, light crops of peas, beans, celery and lettuce were planted, so the loss of ground during the non-productive period was very slight. Contrary to usage, they were cut first time four years after planted, or five years old. The results obtained fully warranted the prolonged idleness. The plants showed such vigor as to reach a height of nearly six feet one month after eight weeks' cutting.

Of late only imported French early Argenteuil asparagus is grown. Seed is imported and

roots grown from them. The balance of the land is laid out in small plots, where extra early peas, English bush lima and French stringless beans and celery are grown in succession. Always two crops are harvested the same season on open land. Extra early peas and beans are plowed under in June; after gathering is over the land is quickly prepared, manured and replanted. Bush limas, stringless beans and celery follow peas; millet and corn fodder, string beans. The nitrogen made available by this process is especially beneficial to the young celery plants, and only phosphoric acid and potash containing fertilizers are necessary to give the second crop the balanced plant food.

All products are guaranteed, and if anything, through oversight, is found to be not in accordance with the standard obtained, credit is given and charged to profit and loss account. Only new, attractive packages, properly labeled, are used. Nothing but " left-overs " are shipped to commission dealers. The prevailing produce market quotations have absolutely no influence on quotations given. Therefore, only buyers who desire something superior than can be obtained in the open market are sought.

As in every successful business, expenses are reduced to a minimum and nothing is wasted. Two horses are kept; a Jersey supplies milk and butter. Surplus of the latter is sold locally in enough quantities to pay for her feed. Thoroughbred fowls supply eggs and meat, with enough to sell to make them self-supporting.

In help only two men are kept the year round. Additional labor is employed in busy season. The hothouse is largely extended, and asparagus is forced in winter by the French method. Hotbeds supply romaine lettuce and radish in quantities during the cold months.

The place has yielded fifteen per cent. on the investment, with a surety for still better returns if fully developed. As high as $400 per acre, under most favorable conditions, have been grown. The actual operating expenses, which include improvement, help, seeds, materials, feed and sundries, are carefully watched, and rent, vegetables, fruits, butter, milk and eggs for family use are credited on the right side of the ledger.

And last, but not least, the property, as a revenue-bearing investment, has naturally largely increased as to its intrinsic value, which is the happiest feature of the experiment, as there is a great satisfaction in seeing one's earnest efforts crowned with success. On the whole, the record is a remarkable one and the results most interesting.

Autumn Work in the Garden

By Ida D. Bennett

WITH the coming of the first frost the glory of the garden begins to wane, unless one has a convenient water system and can, by turning the hose on the plants visited by the frost, preserve, for a few days or weeks longer, the beauty of bloom and leafage. These warm, mellow days that come after frost are very lovely and very useful, too, in ripening the wood of hardy shrubs and the bulbs of plants like the cannas and caladium. Lilies, too, which have passed through a genial Indian summer are apt to stand the rigors of the winter better than if subjected to the soaking of chill rain and sleet before the season for their long winter sleep arrives. But when at last the frosty nights of October usher in thoughts of winter, a season of activity, only second to that of spring, begins in the garden.

All cannas, dahlias, gladioluses and other bulbs that need protection of the house or cellar must be dug and given the necessary drying, or curing, in the warm sunshine before packing away in dry sand for the winter. This done, attention should be turned to the annual beds, and all plants pulled or dug up and consigned to the compost heap, after which the beds should be raked clean and level and the paths cleared of all weeds and dead leaves.

At this time, too, a close watch should be kept for cutworms, cocoons of various caterpillars, and all that are found destroyed. Much may be done in this way to reduce the number of worms the coming season.

Under the sides of boarding of the house and buildings will be found the chrysalids of the cabbage butterfly, and under steps and similar places will be found the cocoons of the hickory tussock moth and that of the arctea acrea. Along the borders of the beds, between the curbing and the sod, you may look for the cut-worm and destroy him, or he may be baited by mixing a little meal and sweetened water to which has been added a little Paris green and placing it on the freshly raked beds at night, as it is then this worm feeds, remaining dormant during the day. As far as is possible all weeds should be eradicated, root and branch, and the lawn and back yard raked clean, removing all litter to a safe distance and burning all noxious matter, as such material left to decay and soak around the house in the winter is a principal source of diphtheria and typhoid fever; and I have known a case of diphtheria traced directly to a field of decaying cabbages near a house, and decayed vegetable matter in a cellar and door yards is responsible for most cases of typhoid fever, and should no more be allowed to remain than poison in a cup from which one is about to drink.

This late fall cleaning will also greatly facilitate the spring work in the garden, which is a distinct advantage, as there is always a maximum of work and a minimum of time for every moment of the first spring days.

Many plants may be transplanted in the hardy border at this time to advantage. Plants may be divided and reset and every effort made to further the spring gardening. Along this line will be the securing of fresh soil from the woods and marshes and putting it in a convenient pile for the frost to mellow. In the spring it will be difficult to attend to this, as the marshes are usually too wet at this time to get on with a team and the farmers are too busy to attend to it, providing one must depend on their help. It will be well, too, to look out for a supply of well rotted manure, if one's supply is limited. Later in the winter, when the farmers begin to haul manure from the town stables, it may not be easily obtained.

See that all beds containing perennials, especially paeonies, roses, lilies and the like, are elevated sufficiently to shed water, as water standing around the roots of perennials is almost always fatal, and certainly will interfere with perfection of blooming. If the beds are not high enough add earth from some other bed until it is, and see that there is not a hollow left between the sod and bed for the water to settle in and work back into the bed again.

All cold frames should have the surface of the earth above that of the earth outside, and a drain provided in one corner by digging a hole a foot and a half or two feet deep and filling it with stones and broken pottery to carry off the water. This is quite important, as a sudden surface thaw when the earth is frozen may fill the frames with water, which it will be difficult to remove. This happened to my own cold frames a few years ago, when, through confidence in the natural drainage of the land, the precaution had been neglected, and I arose one morning, after a sudden thaw, to find nearly a

foot of water in my frames, which had to be removed with a force pump. This winter, when six feet of snow on top of the frames vanished in a night, the frames were found dry and safe, owing to a well constructed drain.

Plants situated along the side of porches should be protected from the water dripping from the eaves, as well as from the frost, by placing boards to shed the water. All protection should be given with the plain fact in view that it is given to prevent thawing more than freezing; no amount of protection will prevent the latter when the ground all around is frozen, but it will prevent the cold winds reaching the plants, and the sun shining on them when frozen, and, if properly done, the settling of water around their roots. Dead leaves, evergreen boughs and corn stalks are all excellent for protection, the two last being preferable where plants with evergreen leaves are to be protected, as pansies, carnations and hollyhocks. Dead leaves are not good for these plants, as they freeze around them—unless covered with boxes or boards to shed moisture and keep them dry—and cause them to decay. Evergreen boughs and corn stalks may be piled so as to shed the rain or, where the clumps are isolated, loose boxes—that is, boxes not air-tight, though calculated to shed water—may be turned over and loosely filled with leaves. Plants too tall to be covered should be wrapped with straw and corn stalks; a good way being to stand a few corn stalks around the plants, their ends slanting out enough to shed rain, and to weave the straw in and out through them or stand it straight up, the corn stalks supporting it. Tie closely at the top and more loosely further down. Altheas, though generally considered hardy all over the country, are doubtless benefited by this much protection. The severe winter of 1898-1899 killed every althea in this vicinity, which would not have been the case had they been protected, I think. My own, which on previous winters were cared for, were neglected, owing to my absence in the city, and succumbed with the rest, and I shall never risk one unprotected again.

Plants on the east side of the house protected by a wing or building on the north rarely need protection; while plants on the west require special care. All climbing roses, clematis and similar vines will be greatly benefited by having sacking, old carpet or even straw matting tacked over them. This should come well down over their stems and be united with root covering, or the frost may cut them off below the shield. The Boston ivy, which is difficult to establish in our bleak North, may be successfully grown by observing this precaution.

Window boxes should be looked over, and those containing geraniums and plants that will live over winter consigned to the cellar, while annuals should be removed, the boxes cleaned and stored in a dry place, ready for spring.

This is also a good time to visit the marshes for cattails, which make excellent stakes for house plants, especially for fresias and carnations, and whose supports are always much in evidence; every reed, if cut low, will give two or three supports, round, smooth and sightly.

Boxes of compost should also be provided for winter potting, as lack of earth for this purpose is often very annoying. Dry sand also will be needed, and material for drainage—charcoal, broken shards and moss.

Pots should be given a good scalding with strong soapsuds, as the use of old and dirty pots is a fruitful source of insect pests in the window garden. See that the glass of the cold frames is air and water tight, and provide some sort of water-proof protection in the form of old rugs or mats for severe weather, as it is easier to attend to this while the weather is pleasant than in the midst of a howling blizzard. And while all these various precautions seem a great deal of trouble to take, they are really but little if taken in time; and one is apt to congratulate themselves during the rest of the winter over the forethought that makes peace—as far, at least, as the garden was concerned—possible and the spring work so much easier.

Science for the Home

Plumbing on the Farm

THERE is probably no class of people who, on the whole, so deliberately neglect plumbing problems as presented in the house as the farmer. And it might also be said that few people need the plumber more and need him greatly. It is but fair to point out, however, that the farmer is not wholly to blame in this neglect. If he avoids the convenience and value of a plumbing installation in his house it is more apt to be through ignorance of what to do, where to obtain the apparatus, and, above all, dread of the cost involved, than from any real or studied indifference to the subject.

It may well be questioned if the lack of plumbing facilities on the farm is not more due to the indifference with which the farmer is regarded as a purchaser by the plumber than from any views the farmer may have on the subject. Most large businesses of the present day have been built up through the energy with which their products have been brought to market. The man who lands a customer is apt to value him more highly than the chance purchaser, because the former represents a direct return on the necessary effort to obtain him, and because he also knows that the chance customer would not come along had he not been influenced by some effort, perhaps then impossible to trace.

The farmer is a difficult class to reach in any line of manufactured goods, because he is so widely distributed that the concentrated trade possible in crowded districts is out of the question. It would seem, however, that the field for the extension of plumbing sales among the farmers was so large that it might profitably be cultivated by the plumber and dealer in plumbing supplies.

The farmer is a large user of water, for no farming operations can be carried on without it. The installation of a water plant for farm purposes—for use in the market house and barn—is, therefore, one of the first essentials to successful farming. This, however, should be but the first step, for a water plant that gives runnng water in the barn can afford the same facility in the kitchen at small additional expense. No farm wife need be told of the superior merits of running water in her kitchen over the old-fashioned well, or the hardly less archaic hand pump. The latter has, of course, some conveniences over the former, but it entails weary work and adds a quite unnecessary burden to the many labors that fall to the wife on the farm.

But assuming that running water has been brought into the farm kitchen, the question may well be asked, Why stop there? Why not a bathroom; why not a separate bathroom for the men help? Why not shower baths and all the conveniences that modern plumbing has brought to a relatively high degree of efficiency? All these things should follow as a matter of course, and no doubt would do so could the farmer be convinced as to their utility and be satisfied that their installation would not cripple his financial resources. The latter point is apt to have more weight than the former. There is unquestionably a large field for business in this direction.

A Little Friend of the Rose

By S. Frank Aaron

"It can never be too strongly impressed upon a mind anxious for the acquisition of knowledge that the commonest things by which we are surrounded are deserving of minute and careful attention."—RENNIE.

THE flower-loving insects are all friends in need; but the unhoneyed flowers also have their insect friends, not agents of fertilization only, but protectors and champions that fight the battles of those that must depend on the flower stems and leaves and buds to survive. But though the flowers are voiceless, they tell us with none the less eloquence what their enemies are and how they suffer by them. Ask the rose. The withered, skeletoned leaves proclaim the enmity of the saw-fly slug; eaten leaves and others folded over tell of the larvæ of the golden-winged tortricid moth; while cankerous, eaten buds and flowers denounce the rose bug, the aphides, that crowd the green stems and leaves of the newer growth and swarm all over the tender buds.

Annihilate the aphides upon a dozen stems of a thrifty bush and keep others off; then let a dozen others go full of the lice, and watch results. The number and the beauty of the blossoms will be the answer. Now, Nature generally makes a wise effort to strike a proper balance, and though we have heard this denied concerning the potato beetle, yet it is true, more or less. Thus she has furnished several antidotes for the aphis; if she did not the little pests would become a nuisance indeed, past all calculation. This salutary purpose is effected by the several larvæ of the syrphus fly, the lace-winged fly, the ladybug and a number of very small Hymenopterous parasites. Of these latter the most interesting and the most common is the pretty little fly known to the scientists as Praon, which may be called the cocoon-making parasite of the aphis. Any one with sharp eyes may discover this little friend of the rose at work, and may follow, with a little care, its complete life history.

At the time when the plant lice are thickest a small insect resembling a miniature wasp, or an ichneumon fly, which it really is, may be seen making its way among the fat aphides, moving leisurely and with a dignity quite beyond its size, for it usually is not longer than an eighth of an inch. It approaches one of the larger aphides and touches it with its antennæ as a means of certain identification, scent far outranking sight in such matters among insects. If this were an ant the aphis would respond with a liberal supply of the coveted honeydew, but knowing friends from foes it now slings its body from side to side, quite violently indeed for such a lethargic creature, and the little fly is pushed aside. Not liking this it moves on to another or smaller aphid with a less vigorous movement, or pausing a moment attacks the same aphis again, with perhaps better results. Choosing its position deliberately and carefully, with its slender, stiltlike legs lifting it high, it widely straddles its victim, its fore legs often resting on the aphid's back, its slender body and long antennæ much jostled by the agitated plant louse. But now the fly is not to be dislodged. Its keen, swordlike ovipositor protrudes from its sheath and in a moment is thrust deep into the back of the plant louse, and is held for just another moment, until an egg, so tiny as to pass through the slender organ, is deposited into the very interior anatomy of the rose pest. Then withdrawing, the fly straddles off and proceeds at once to convert another aphis into an incubator, and so on, until no doubt the egg supply, perhaps fifty or more, becomes exhausted.

Of course the aphis so treated does not die at once, else Nature's plan would miscarry. It lives and goes on feeding and maintaining the same stiff and seemingly contented attitude for a little while. Meantime the egg hatches a minute, white, maggot-like larva, and this at once begins feeding on the soft muscular tissues of its host. Some little time is required for the larva to complete its growth—five or six days during very warm weather, longer when it is cool. With an instinct that has ever been a marvel to the naturalist the little larva does not touch the digestive organs, the vascular system or the more important nerves for a period, thus permitting the aphis to live and feed until the appetite and growth of the parasite warrant it to eat all before it. Then the aphis dies, of course, and rapidly

Little Friends of the Rose at Work among a Herd of Plant Lice

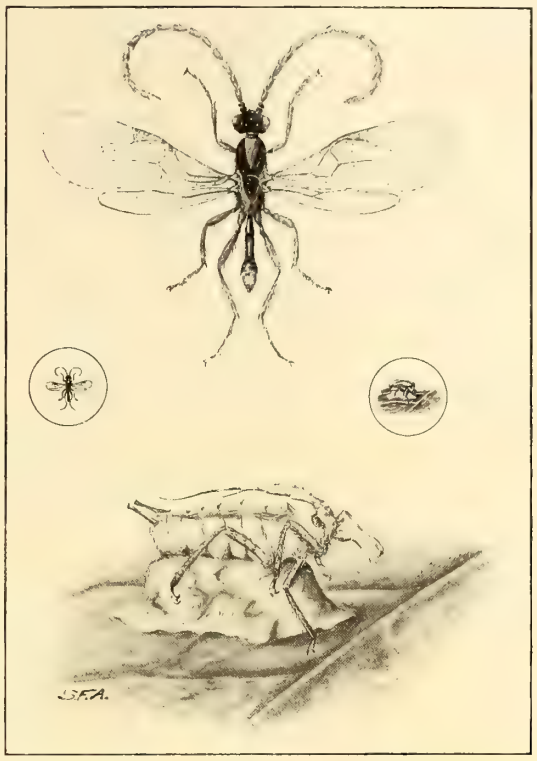
¶ Any one carefully and frequently inspecting the rose bushes and the aphides gathered on the green and tender new growth may see enacted the small tragedies between the parasite fly and its victims.

Miniature Pig Sticking, as seen through Magnifying Glass

¶ The fly of the rose aphis parasite stinging and laying its egg in the body of a rose aphis. The plump little plant lice look like hybrids between a verdant goat and a green pig and they get about much like overfat swine. Their inactivity permits them to be readily attacked, and their only attempt at defense is in wagging their bodies from side to side, which sometimes for a moment disconcerts the parasite fly.

becomes only an outer skin, with head and legs attached.

For some strange reason the aphis, not long before dying, forsakes its place among its fellows. As if ostracized for its condition, although its disease is hardly catching, it crawls away to one of the larger leaves, fastens upon it in exile and thus remains. It is obvious that this benefits the parasite; the aphis here is far less apt to be found and attacked by numerous other enemies that would endanger the life of its guest. But what can influence it? It departs from its habit, for it is altogether social and non-migratory. It removes to a less desirable pasture ground. Normally, if dislodged from the stem and falling on the leaves it crawls back as fast as its indolent legs permit to the stem again. The parasite is alone benefited, but it is out of the world, so to speak; it can not get at its host's locomotory appendages; it is a legless, eyeless creature that at best would make a poor guide if it should get out and take the lead. But the little thing, as unintelligent as it looks, maggot-like, has perhaps a mind of its own, as we have seen. The habit



The Parasite of the Rose Aphis, much magnified

¶ The upper figure is the fly as seen from above; the colors, black, rufous red and yellow, have almost a metallic luster, and the delicate, transparent wings reflect a beautiful iridescence. The lower figure is the cocoon of the parasite beneath the dead, dried and distorted shell of a plant louse, the insides of which have been eaten by the parasite larva while attaining its growth, after which it makes the cocoon. The little figures in the circles indicate the natural size.

is almost invariable; the victims crawl from their usual places and position themselves on the leaves. Out of seventy-one parasitized plant lice I found two on the stem and one on the tip end of a thorn, as if it thought a leaf ought to grow out there, but was too far gone to search elsewhere.

Upon attaining its growth the parasite larva cuts open the aphis skin underneath and squirms part way out, so as to have full swing with its head end. Then it begins the construction of its cocoon, made, as with most insects, of its saliva, and eventually becoming, after a few hours' work, a silken, parchment-like, bulging, tent-shaped affair, upon which the now shrunken and distorted skin of the aphis rests as on a pedestal. The parasite enters the completed cocoon and becomes an inactive pupa or chrysalis, and in a few days thereafter, if it is warm, the perfect insect, the tiny fly, emerges and takes wing to work more mischief among the rose pests. The illustrations fully elucidate the facts set forth in the text. They present a wonderful insight into a small natural force, not the less masterful because of its mimic scale.

Fire Protection

Safeguarding Temporary Structures

THE danger from fire to which any structure, large or small, is subjected, unless it be built in accordance with the most approved ideas concerning fireproof erections, is so imminent that only the most carefully constructed buildings can be looked upon as other than hazardous risks. Temporary structures do not escape this rule, and often require quite as much care in their construction and need as much protection against fire as permanent erections.

It is not many years ago that the whole civilized world was shocked at the dreadful catastrophe of the burning of the Paris Charity Bazaar. It occurred on May 4, 1897, and resulted in a terrible loss of life. It was occasioned by carelessness in the use of a lamp attached to the cinematograph. The flames spread with prodigious rapidity, and one of the most unnecessary of modern tragedies was enacted within a very short time. The building was a temporary one, but had previously been used for theatrical purposes. It was fairly well supplied with exits, one of which was locked or bolted at the time; but the flames spread with unparalleled rapidity, and the ruin was complete almost before the nature of the trouble had been realized. Many experts and many learned committees investigated this fire and drew up voluminous reports and papers concerning it, all of which pointed to one general conclusion: the need of greater care and the necessity for greater protection against fire dangers as urgent in structures of this class as in more permanent buildings.

More recently a somewhat similar case has attracted attention in England, fortunately without loss of life. A London man of wealth had built a temporary supper-room behind his house for use in an extensive entertainment he was about to give. It was totally destroyed by fire immediately before the time set, occasioned by improper electric insulation. There was no loss of life, as has been said, because the room had not come into use; but subsequent investigation demonstrated conclusively that had the fire occurred when the room was in use there would have been a calamitous catastrophe. The owner of the premises brought suit against the caterer who had arranged the room, but the jury failed to give him damages.

This, however, is something quite apart from the important lessons to be drawn from the affair. The suit for damages attracted wide attention, since temporary ballrooms and temporary supper-rooms are quite common in London and elsewhere on the occasion of large entertainments. It was found that absolutely no provision had been made for fire or other danger. Not a single pail of water had been provided, nor a hand pump nor fire extinguisher of any sort. The temporary wiring was admittedly of the most dangerous sort, and yet no protection had been provided for use in any sort of emergency. The very situation of the room was also found to be dangerous: it was built over back additions to the house, and had only two exits; had any one attempted to break through the canvas walls he would have fallen into a deep area.

Buildings of this description are not erected every day, nor does every one have occasion to use them. Catastrophies in connection with them are, moreover, comparatively rare; but it is a singular thing that when fire does arise in them the resulting injuries are likely to be very heavy as well as thoroughly unnecessary.

The Training of Cavalry Officers in France

By D. A. Willey

THE military strength of France is represented by an army of six hundred thousand, of whom thirty thousand are officers. To educate the officers in the infantry, artillery, cavalry and engineering branches twenty-three schools have been established in various sections of the republic. Of these the infantry and cavalry school at St. Cyr is perhaps the best known outside of France. The engineer and artillery officers are trained principally at Fontainebleau. At Saumur, however, the great majority of subaltern cavalry officers receive their education, entering the institution as cadets. Saumur is the largest of the series of schools, and such is the system pursued that it differs radically from those of any other country. Possibly Fort Riley is the nearest approach; but only non-commissioned officers and troopers are taught horsemanship in Kansas, while many of the graduates of Saumur hold the rank of lieutenant.

Over the Bar with a Good Seat

It is needless to say that the cavalry arm of the French service is one of the most important. Each of the various regiments is composed of five squadrons, making a total strength of twenty-five officers and seven hundred men. Consequently special facilities are required to train the officers, as upon them rests the responsibility for the efficiency of their commands. The course pursued at Saumur, however, is sufficiently rigorous to convert a man into a veteran horseman so far as mere skill is concerned. It embraces not only the ordinary instruction in riding, but performances in the saddle which are on a par with the feats of the Rough Riders, the Western ranchmen, and far excel the achievements of the average circus performer. Next to the Italians, the French cavalry officers are probably the best equestrians in Europe on account of the instruction they receive at the institution referred to.

Thrown Over the Horse's Head

The first lessons given the novice are in knowledge of his mount. He becomes so experienced that he can detect the slightest sense of viciousness in the animal. Thus when riding him for the first time he is on the alert for any tricks which the animal may try to play upon him. To acquire a seat, he is first given a horse thoroughly broken in all the gaits and a gentle animal, using an ordinary single bit, but a blanket in lieu of a saddle. This is the course followed at some of the American cadet schools, in order that the rider may get the proper grip with the knees and balance himself to the motions of the horse; but this is only one chapter in the management of a horse at Saumur. The expert cavalry officer is expected to be able to keep a firm seat on any sort of mount, no matter how fractious or vicious, and to perfect him horses are trained purposely to kick, balk, rear and even "buck" like the Western broncos. Frequently thoroughbreds are selected for this purpose, as they are far more mettlesome. In some cases the horse is provided with a special harness. By various manipulations of the reins attached to the harness his movements are controlled. For example, a twitch of the rein on one side causes him to kick with his fore feet, while a twitch of the opposite rein makes him kick out behind.

Lieutenant de Kies Leaping a Dinner Table

Taking his seat in the saddle, the novice assumes the usual positions. The horse is generally placed between two posts padded with leather, so that neither animal nor rider will be injured by coming in contact with them. The horse is hitched between the posts with broad straps of leather or canvas attached to the headgear, so that it is impossible for him to break loose.

Not as Quiet as He Seems

The Horse Trained to Rear

A Playful Mount

He is then put through a course of "stunts" which seldom fails to dismount the rider, who is unaccustomed to these movements, no matter how proficient he may be in trotting, loping or even going over hurdles. While he may be thrown sidewise from the saddle or backward, quite frequently he is thrown over the animal's head and into the arms of the men waiting to break his fall.

A few months of this sort of work so perfects the cavalryman that he can keep his seat on an animal which would be beyond control with an ordinary rider. As the accompanying illustrations show, he can adjust himself to a remarkable variety of movements, and consequently is enabled to perform jumps which would do credit to the most expert cross country rider. Leaping a fence six feet high is considered an easy performance at Saumur, while to show their efficiency the cadets sometimes jump their horses over dinner tables spread with dishes without touching a dish, as well as taking flying leaps across carriages and wagons.

Kicking at Command of Instructor

The command of cadets at the school give performances from time to time during the year to illustrate their skill in horsemanship. These are held in the riding-hall or upon the practice ground facing the school, and include the management of fractious horses, leaping contests, charging with lances, as well as evolutions by companies and battalions, intended to show their perfect control of their mounts. For practice in inclement weather a very large hall is connected with the cadet barracks, but most of the exercises are carried on in the open air on the drill field, which has been prepared especially for this purpose.

The illustrations which accompany this article are characteristic both of some of the ordinary exercises practised at Saumur, as well as some of the tricks indulged in by some of the expert riders. They show what splendid sport these exercises are, as well as the great skill that is developed by them.

The French as a people view outdoor sport and life in a somewhat different manner than the English and Americans. Sport to them is not the whole-hearted affair it is with the English and as it is rapidly becoming with us; but outdoor life has made many advances in France in the last few years, and, in one form or another, it is becoming more and more popular every day.

The training of cavalry officers in horseback riding, while having many of the apparent qualities of outdoor sport, is really a very serious affair, viewed from the French standpoint. If their riders practise high jumps, teach their horses to stand erect on their hind legs and vault over a dinner table or an open carriage, these exercises are indulged in not for the pleasure they give the riders, but to accustom them to unusual conditions and to train their horses to unusual acts. The Frenchman is keenly alive to the improbable; he is constantly expecting the unexpected, albeit always surprised when it happens. His military experiences in foreign lands, toward which much of French military training is directed, has taught him that it is the unexpected and the unusual that counts in the long run, and his severest defeats have been sustained when he has not been so prepared. For many years, certainly since the Franco-Prussian war, French military training has been looking toward foreign possibilities. Their soldiers have been trained in most difficult tasks and subjected to many hardships, that their training may be the more perfect. The varied typography of France readily lends itself to such exercises, and perhaps makes them necessary for matters of internal defense. The equestrian training at Saumur is but one phase of French soldier life, illustrating the extreme care with which its officers and men are trained.

Jumping Over a Victoria

Harvard's Botanic Garden

By Mary Caroline Crawford

THAT increasing army of pilgrims who each summer return to New England to enjoy the delightful excursions for which Boston offers a natural geographical center will, this year especially, wish to include in their itinerary a day at the Harvard Botanic Garden, inasmuch as 1905 marked the centenary of this noble institution's conception. The occasion is full of interest, not only as an anniversary, but also as an illustration of the slow growth of that love for nature and gardening which has now attained such imposing proportions among us.

The beginning of the garden idea in connection with a college dates back considerably more than a century. Over two hundred and thirty years ago, indeed, Leonard Hoar, then president of Harvard, wrote as follows to the philosopher Robert Boyle, respecting a botanic garden: "A large, well-sheltered garden and orchard for students addicted to planting . . . are in our design for the students to spend their times of recreation in them; for reading or notions only are but husky provender."

The Botanic Garden did not then become a reality, however. It was almost another century, in fact, before anything more was done about the matter. In 1784 the General Court of Massachusetts was asked by the Corporation of Harvard College to aid in founding such a garden. But the State was impoverished after the long and exhausting War of Independence, and though the king of France offered, through his Consul-General at New York, "to furnish such a garden with every species of seed and plants which may be requested from his royal garden at his own expense," his offer was respectfully declined—and for twenty years more the project slumbered.

On the first day of March, 1805, however, we find the books of the Harvard Corporation recording "a plan for a professorship of Botany and Entomology in the University," which was communicated and read to a number of subscribers to a fund for that purpose. At subsequent meetings the proposed statutes and regulations were discussed, and on March 28 these were adopted. After the induction of Professor Peck into the first chair of Natural History ever established in an American college, and the inaugural oration in English which accompanied the ceremony, "they sat down to a decent dinner in the Hall," declares the minutes.

Prof. Asa Gray's House and Herbarium

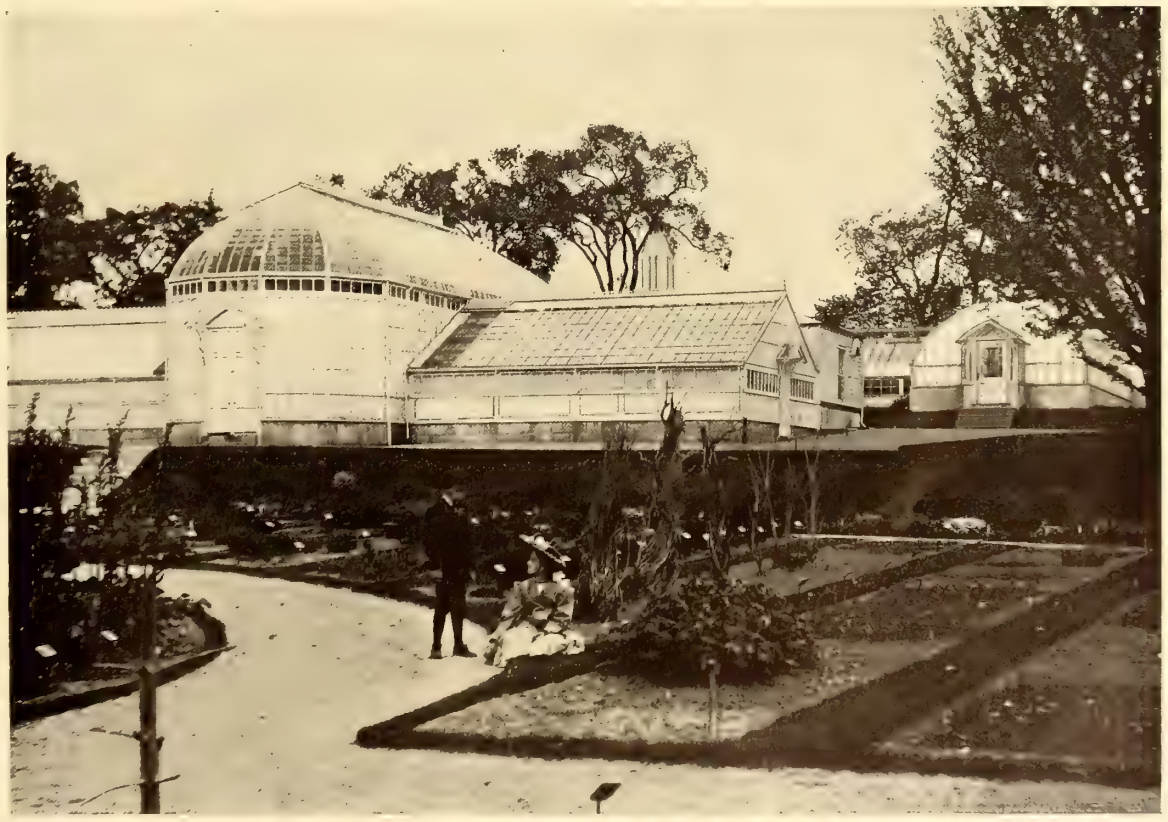
Dr. Peck addressed himself heartily to the task of laying out the Garden. Wishing to have an acquaintance with the most noted European parks in order to serve his charge to the best advantage, he immediately went abroad for a tour of travel and observation. By 1808, however, he was back in Cambridge building a greenhouse (on the site which had been purchased through the subscription and by the means of a grant from the State of wild lands in Maine), and arranging for his initial lectures in natural history. There were at first small classes and scanty returns from the Garden. The story of those pioneer years is indeed one of constant struggle.

A Small Section of the Garden

The original subscribers seem to have assumed no responsibility to sustain the noble enterprise they had founded, and no means were at hand for the adequate support of the work. The manner of supplying the Garden with new specimens was admirably simple and neighborly: Cambridge gentlemen having greenhouses presented the Garden with new plants "as they happened to acquire them." Living exotic plants could then be purchased by applying to the gardener, and the meager receipts were further increased by a charge of twenty-five cents levied upon each visitor. "Strangers of distinction, clergymen and those connected with Harvard" seem to have been the only people admitted gratis in the early days.

After Professor Peck's death, in 1822, funds were at such low ebb that his chair was allowed to remain vacant. But this interregnum period is by no means barren of interest, inasmuch as Thomas Nuttall, the distinguished botanist, who had been several years in the country, was appointed curator of the Garden, and gave such instruction in natural history as was at that time demanded. Nuttall was a good deal of a "character." In England he had been a compositor in a printing office; but, a passion for travel having seized him, he abandoned this peaceful occupation and came to America to explore the sources of the Missouri and the Arkansas. Captured in Philadelphia by Boston friends, Nuttall was brought on and established in Cambridge, where he remained for several years, troubling himself little with students, but doing a valuable service to natural history, nevertheless, through his "Manual of the Ornithology of the United States," a work remarkable for the close knowledge it reflects of the habits, manners and affinities of our birds. The preface to this book is generally admitted to be one of the most admirable essays in the literature of ornithology—a classic for which Boston may well enough claim the credit, inasmuch as the book was incited by Mr. James Brown, who was one of the founders of the Boston publishing firm of Little & Brown. Mr. Brown was himself a lover of ornithology and a good friend of Nuttall. Evidently he was one of the few whom the naturalist permitted to share in his hermit-like life. So desirous was Nuttall indeed of avoiding his fellow creatures, that he never used the stairs of his house adjoining the garden, but reached his sleeping apartments by means of a trap-door and stepladder. A panel hung on hinges in the door which connected with the kitchen served for the passage back and forth of a tray upon which his daily food was handed through.

After ten quiet years in Cambridge, Nuttall was seized by another attack of his old Wanderlust, and departed suddenly for the Sandwich Islands, returning by way of the Cape of Good Hope in the vessel which had for one of its crew the author of "Two Years Before the Mast." After a sojourn in Philadelphia, the eccentric naturalist went back to live and die in England. He had been here long enough, however, to do a great work for ornithology and to supply Cooper with the Dr. Battius of his prairie life novel. Nuttall is further interesting as the precursor of Ernest Thomp-



The Palm Houses

son Seton, who hunts without powder. It is related of him by Ernest Ingersoll, the naturalist, that once, when guns were called into sudden requisition during a journey across the Rocky Mountains, Nuttall's fowling-piece was found stuffed to the muzzle with bulbs of new species.

Not until 1842, when Dr. Joshua Fisher, of Beverly, Mass., a Harvard man of the class of 1766, endowed a professorship of natural history, to which Dr. Asa Gray was promptly called, did an era of prosperity dawn for the Botanic Garden. Dr. Gray was then only thirty-two years old,

One End of the Virgil Garden

but already he had attained marked distinction in his chosen branch of knowledge. From the first year of his coming to the college a glowing interest in botany developed among the students. Quarters had to be enlarged, courses extended and the corps of workers for the Garden increased. Unfortunately, though, there was no corresponding augmentation of the endowment. Only Dr. Gray could have kept the enterprise going with such inadequate funds as were at his disposal. By the expenditure of untiring energy, however, this very able curator enriched the display by large numbers of native and foreign plants, and soon caused the Garden to become the recipient of the newer treasures coming from the West and Southwest. Dr. Gray was wont to place in nooks not easily accessible to the public the rarer plants, which have since become the common property of horticulture, and in this way he introduced some of the choicest novelties.

No worthy branch of Harvard University seems to have suffered more, first and last, for lack of support, than the Botanic Garden. About 1860 it became a serious question, indeed, whether all operations there should not cease. At this critical period, however, a subscription of $1,500 a year for three years was raised through the exertions of Dr. George Hayward, to give temporary relief, and in 1864 Nathaniel Thayer gave a building for the invaluable Herbarium, comprising over two hundred thousand plants, and the library of twenty-two hundred botanical works (including an autographed copy of Goethe's "Metamorphosis of Plants"), presented to the University by Dr. Gray. In 1871 H. H. Hunnewell added a lecture-room. Money for running expenses was still lacking, however; and from 1872 Dr. Gray had no salary but his house rent, and personally bore the expense of a curator for the Herbarium which he had presented to the college. During these latter years, though, the professor had no classes, but devoted his entire time to the completion, in the sunny study which adjoins the Herbarium, of his long-delayed "Flora."

The classes had meanwhile been placed in the hands of Prof. George L. Goodale, who is still at the head of this department at the college, and who is also now the curator of the Garden. In the twelve years between Dr. Gray's relinquishment of the active duties of the curatorship and Dr. Goodale's assumption of them, Prof. Charles Sprague Sargent was in charge of things, at the corner of Linnaean and Raymond Streets, Cambridge, and it is to his skill and to the increased funds resulting from a vigorously conducted subscription canvass that the Garden owes much of its present attractiveness. The distribution of species was changed at this period, and many improvements, which poverty had hitherto forbidden, were successfully introduced.

For inspection the Garden may be conveniently divided into the upper level and the area below the terrace, where the natural order of flowering plants and the genera of ferns and their allies are arranged in formal beds, so disposed as to exhibit many of the affinities of the families. Here, too, are special beds devoted to groups of plants of particular interest—such as those mentioned by seventeenth century writers, and those celebrated by Virgil and Shakespeare.

The Shakespeare garden is the most interesting spot in the estate's whole seven acres, not only on its own account, but also for the suggestion it offers to private garden makers. At this time of the year the marigold is particularly conspicuous among its flowers of long and distinguished lineage. Perdita says:

> "The marigold that goes to bed with the sun
> And with him rises weeping; these are the flowers
> Of middle summer."

Strolling farther along the grass-bordered walk, away from the greenhouses, that alluring trio, mint, balm and savory, are found, all of which are attractive plants, though not in bloom in the late summer. The gardener here will tell you that savory is not named from its qualities of taste or savor, but is a corruption of the old Italian name—savoreggia. The marjoram—mentioned in the lines—

> "Here's flowers for you,
> Hot lavender, mint, savory, marjoram"—

is not, however, to be found in the Shakespeare bed, but just across the way in the Virgil garden. Here also is the rosemary, so well remembered by Ophelia's mad lines, "There's rosemary that's for remembrance; pray, love, remember," and by its homely property, the keeping moths out of old-time clothes chests.

The violet, the rose, the columbine, the primrose, the poppy, the pinks and the pansies, all so well known, most of which are so often mentioned by Shakespeare, and all of which have for us deep and tender associations, are appropriately included in the parterres of this Shakespeare garden. The rose is mentioned by Shakespeare more often than any other plant. He speaks of at least eight varieties—particularly, of course, of the white and red, made famous by the rival wars of York and Lancaster, in the so-called historical plays, and of the damask, which, originally taken by the Crusaders from Damascus, was brought to England by Dr. Linaker, physician to King Henry VII. The English daisy, too, is here, though now past its prime, being a flower of spring, the same as the violet, spoken of by Shakespeare in the "Spring Song" from "Love's Labor's Lost":

> "When Daisies pied and Violets blue,
> And Lady-smocks all silver white,
> And Cuckoo Buds of yellow hue
> Do paint the meadows with delight."

In this garden one may find not only plants pretty in blossom, but the more modest species which are useful as food or from which medicine was brewed for the ailments of the sixteenth century: barley, various species of beans, the bramble with its seed-laden berries—to which Falstaff refers in his rant, " Give you a reason on compulsion—if reasons were as plentiful as blackberries, I would give no man a reason on compulsion "; flax, with seeds that were made into healing poultices for mediæval as well as modern sore backs; oats, and the climbing vetches, which are thought by some scholars to be the tares mentioned in the parable of the sower. Shakespeare speaks of a number of these grains in " The Tempest," where Iris addresses Ceres:

> " Most bounteous lady, thy rich leas
> Of wheat, rye, barley, vetches, oats and peas."

There is also the tart rhubarb, which the great poet mentions as a purgative drug, but which, in Elizabethan times, probably had no culinary use, together with its botanical cousin, the dock, spoken of by Burgundy in " Henry V.," and the hardy leek and tearful onion. The qualities of these last as food were evidently appreciated by Shakespeare, for Bottom is made to say to his fellows: " And most dear actors eat no onions nor garlic, for we are to utter sweet breaths."

In the shade of the trees which line the western edge of the Shakespeare garden grows the " cold lettuce " and the hyssop —both referred to by Iago in his famous metaphor of the human body and the garden—the former plant noted for its narcotic qualities, the latter for its part in the cruelties of the Crucifixion. Near by grows our American potato. It is interesting to note that almost the earliest mention of potatoes, after their introduction from Virginia into Ireland in 1584 by Sir Walter Raleigh, is made by Falstaff in " The Merry Wives of Windsor," where he says: " Let the sky rain potatoes; let it thunder to the tune of green sleeves." In this same bed is the familiar radish, considered by the Elizabethans as a preventive of snake bites; the plantain, to which great medicinal properties were attributed; the old spicy mustard, the poisonous aconitum, which Shakespeare compares in deadly qualities to the " rash gunpowder," and the parsley, which recalls the speech of Biondello in " The Taming of the Shrew." " I knew a wench," says he, " married in an afternoon as she went to the garden for parsley to stuff a rabbit "—showing that this universal herb was used as a garnish as far back as the time of the Armada and the Globe Theater.

The ivy, which ordinarily " enrings the barky fingers of the elm," and pervades all romantic literature, seems to have been only a vicious parasite to Shakespeare's mind. In several passages he refers to it in the same spirit as in the " Comedy of Errors," where it is called " usurping," and again in " The Tempest," as " The Ivy, which had hid my princely trunk, and sucked the verdure out on't."

What with this interesting classical department (started five years ago by Professor Goodale), the Virgil garden, the seventeenth century plants of Parkinson and the native species, it ought to be very easy to develop a knowledge of horticulture or to study botany in Cambridge. After a woodland search one has only to bring the treasures here and find their names, not by picking the pretty blossoms to pieces and laboriously searching among the dry technicalities of a dusty volume to find their genus and species, but by comparison with the blossom's living brethren. People have begun to find this out, too, and now they come as early as February to see the roses, cyclamens and cinerarias, then in bloom under glass.

The Garden is never quite bare. From earliest spring to late autumn something is blossoming. In March there are snowdrops and crocuses in sheltered places near the greenhouses; in April the hardy perennials begin to appear; and from then on, of course, there is a wealth of color and fragrance here to be enjoyed. Beside each growth is thrust into the ground a little tablet containing the scientific and common names of the plant and its habitat. The visitor may even pluck up this record for more convenient reading, if only he takes care to put it back in its proper place.

Among the most constant visitors to the Botanic Garden are children, who have become familiar with many of the common flowers through their kindergarten instruction. These little folk make a very pretty picture in their bright cotton dresses, as they march two and two along the green-bordered paths. Yet when all is said it is the people who most enjoy the treasures of this unique spot. Though Harry and Harriet may not be able to quote verses to illustrate the Shakespeare specimens, they appreciate thoroughly the privilege of being permitted to wander at will over the grounds and through the greenhouses. Often four hundred

The Great Auclers and the Beech Hedge

visitors come to the Garden of a Sunday afternoon. It is the one Harvard department which is " popular."

The greenhouses of the Botanic Garden make very little pretense of architectural glory, but regulations for preserving the proper temperature are on the most approved plan, and the arrangement of the specimens is capital. The gaudy ornaments of the florist's shop, azaleas, camellias, carnation pinks and the like, may perhaps be missed, but there are hundreds of things here not to be found in other greenhouses and of distinct interest. The cacti, for instance, are truly extraordinary. Their blossoms, you note, are out of all proportion to the size of the plant. A miserable little thing has a flower some eight inches long, while an American cactus, which would weigh three hundred pounds, shows only a shy half-inch bloom.

The division given over to economic plants excites great popular interest at all times.

The Household

Household Decoration: The Man or the Woman—Which?

IS THE man or the woman the better qualified to design and arrange the matters commonly included under the head of household decoration? The question is, perhaps, somewhat academic, since in practical affairs it is not always the person who is best qualified to perform the work who obtains it, but the person who gets the job. Yet the matter has some aspects which deserve a brief consideration.

The plea of the woman as the household decorator by temperament, understanding and general fitness is somewhat urgent. It is quite apparent why this should be so. Women live more in houses than men do; that is to say, the average woman passes more of her time within her house than the average man. The woman's affairs are, moreover, household affairs. She conducts the house; she keeps it in order; she arranges the furniture and the decoration; she chooses the bric-à-brac; she selects the colors; most of the objects within the house belong to her or have been personally acquired by her. If there is labor or thought involved in any of these things she gives it gladly and naturally. The home is her kingdom, where she reigns supreme—or tries to, which is possibly the same thing.

Her claim to be the household decorator par excellence rests on these things and on what she regards as a natural intuition to do just what is right, and in the right way, in such matters. It is a claim that can not be roughly pushed to one side. Women are concerned with household affairs, and have more or less taste in such matters, but so few women are born household decorators that much study and training are necessary to properly equip one for such work.

This immediately clears up the whole situation. It is not whether a person be a man or a woman that makes him or her a competent household decorator, but the mental equipment that has been gained for such work. It is not sex that counts, but training. It is not a smattering of knowledge, but a great deal of it. It is not intuition—although that often helps, and helps vastly—but downright hard work that has given the decorator adequate knowledge, trained and cultivated his or her taste, and, in many ways, given adequate preparation for the work to be done.

The time has long since passed when women should compete for work because they are women. It is true enough that some women may do better work than some men, but in the fierce competition that now surrounds every occupation of life the question as to whether the laborer is a man or a woman counts, in most cases, for very little.

The house owner, about to decorate and furnish his new house, need not therefore ask himself if his decorator shall be a man or a woman. The single problem, and the only one to be considered, is whether the candidate for the work is competent. If he regards a woman as likely to be more competent than a man, obviously the woman will get the job, and if she is competent she will give entire satisfaction. If a man seems the better craftsman to employ he will assume the work and await the judgment of his employer as to what satisfaction he may have given.

It is the workman that counts, not sex, and not nationality.

Household Charm

HOUSEHOLD charm is the most precious of all household qualities. It is an indefinable, elusive, delicate quality that perhaps every householder seeks to have, and which every one ought to wish to give to his house. It is a quality not measured by cost, for, as a matter of fact, it is quite independent of cost. Many costly houses, on which great sums of money have been expended, are entirely without charm; while many inexpensive dwellings are thoroughly charming in every way.

Do not, however, make the mistake of imagining that charm only obtains in low cost houses and low cost rooms. The comparatively inexpensive room on which thought and care, love and interest, have been lavished is more apt to be attractive than a high priced room simply because all these things have gone into its furnishing and arrangement. Richly furnished rooms can be as thoroughly charming as those furnished at less cost, but their charm will be of a different nature, since it will be produced by different materials and in a different way.

The whole question harks back to one of taste and interest. If one has good taste, or consults with a person of good taste, the results are more than likely to be interesting and satisfying. And with good taste must go a complete and very real interest in the work in hand. One must not only know how to decorate, furnish and arrange a room, but one must be deeply interested in the work in hand.

It is, perhaps, because of this, more than from any other reason, that the room of more moderate cost is more likely to be charming and delightful than the one in which price has not been considered. The man or woman of good taste who is about to furnish a house will carefully consider every item of expenditure if the money is to be counted and made to go as far as it can. With ample means there is likely to be a personal indifference to such things. There is always the possibility and the ability of changing a room, of rejecting its ornaments if one wearies of them, of altering the color and of moving things about without regard to the money they have cost. Carelessness is engendered, and real, definite personal charm in a room entirely disappears.

The charming room is the personal room, the room that gives evidence of personal care and thought, in which every object seems to have personal merit, in which the color scheme, the walls, the curtains, the carpet or rugs give evidence, as they are thoroughly capable of giving, of personal selection and value. It is thought that produces results in room arrangement, exactly as it brings results in other things; and unless a room gives evidence of thoughtful care, of intelligent study, of manifest intent to produce a harmonious interior, it can have no charm, and, at the most, will have only interest of a comparatively slight amount.

But the effort given to one room must be applied to the whole house. It is a good thing to have one charming room, but the owner who has produced such a masterpiece will not remain content with one achievement. One good room implies many good rooms, and many good rooms mean a good house, a house not good in parts alone, but good as an entity.

This means, therefore, that the whole house must be considered as a single whole.

Civic Betterment

Ways to Help: The Body Politic

AFTER the individual the organization; after the organization the body politic. The succession is logical and right. And just as the organization can do more than the individual, so the body politic can accomplish more than either. For by the body politic is meant the governing body. Its importance in all work for civic betterment is very obvious. Civic betterment means public betterment, the improvement of a neighborhood or a whole city or town. Such work can not be done by the individual citizen, nor by the mere aggregation of individuals; it requires definite civic authority in the accomplishment of results, and in most instances it needs the wealth of the public purse in bringing about adequate reforms.

The body politic is, therefore, the most important factor in all work of a public nature. It could, were it so minded, accomplish every possible civic betterment that is good that comes before it. It has direct charge of sanitation; it controls the streets; it fixes the building laws; it can do everything but instil good taste into the minds of citizens who do not know what this means, and who, even when its purpose is made plain to them, are calmly and deliberately indifferent.

But the average body politic does not accomplish public betterments of its own volition. Governmental bodies do not do things merely because they are worth doing. They move in a slow and deliberate way; they will balk at cost, and they will hem and haw at expense; they will hesitate at doing just a little more, when often enough it is that additional fraction which will do the most of all.

The body politic, however, must be brought into the work of civic betterment. It not only can not be ignored, but it must be consulted at every step, its permission obtained, its approval solicited. The public-spirited citizen can not make a contribution to the betterment of his town without first obtaining the approval and consent of the city fathers.

It is obvious that the chief work to be done here is one of education. If the governing body does not understand civic betterment nor appreciate it, it must be taught to do so. We get back, therefore, to the individual and the organization, for both these forces must labor with the governing body, labor night and day, in season and out, if permanent results are to be obtained.

The work the body politic has to do in civic betterment is becoming more and more appreciated, and is yearly bringing fruitful results. Comprehensive schemes for the improvement of an entire city have already been brought forward in many localities, and while the direct results as yet assured are small, the first essential steps have been taken. Plans proposed for Washington, New York, Cleveland and other cities have aroused great public interest, not only among the individual citizens, but among the governing authorities. Whether realized or not, these plans are indicative of good, and point to something accomplished. They mean the body politic is being aroused, that statesmen whose time was formerly concerned with the granting of railroad franchises and the renaming of streets are looking toward public art. They mean a positive and great extension of the movement for civic betterment, for they mean that the last of the three great elements which must help in this work has awakened to its value. This at least was necessary before anything could be accomplished. The next step will be realization. This is the end of all movements for civic betterment.

Is the Billboard to Go?

WHY should it remain? This is the more pertinent question, and one much more difficult to answer than the more general one as to whether the billboard shall go. The arguments for the retention of the billboard are of the weakest possible sort. Its single merit is its obtrusiveness. If it did not catch the eye it would have no commercial value, and if it had no commercial value it would quickly disappear.

The billboard is, of course, an advertising proposition, and all advertising propositions depend on their commercial value. If it did not pay to advertise no one would do so, and the very great use of the billboard as an advertising medium is fine testimony to its paying qualities, or to the eloquence with which its merits are presented by its advocates.

The commercial value of the billboard depends on its conspicuousness. No one ever sees a billboard in a back alley or in spots remote from where people congregate. They flourish in the conspicuous places, and they flourish conspicuously, with vast signs, glaring colors, " taking " designs, with all the showy eye-catching devices that advertising ingenuity can suggest and advertising experience propose.

Now, the real value of this overwhelming display to the community is very small. There are less obtrusive ways of bringing one's wares before the public than in painting them on a fence or in thrusting them into the foreground of a beautiful scene. The advertiser deprived of his billboard is not pushed out of business, but has simply to find other means, and less offensive means, of reaching the public.

For the billboard is offensive, glaring, staring, horrible. Individually a specific advertisement may have merit, and great merit—may, indeed, be a genuine artistic effort; but taking the billboard as a mass it is a studied offense to good taste, flourishing mostly where it is not needed, seen when it is not wanted to be seen, demanding attention when one would rather think of other things.

The agitation against the billboard as a municipal disfigurement has already reached goodly proportions, and the campaign is as yet in its infancy. Some efforts, and well meant efforts, have been made to improve them, partly by designing the billboard itself and partly by improving the designs of the signs. Nothing has, however, yet been accomplished that amounts to definite and general improvement, and hence it is pertinent to inquire if the billboard is to go?

One of the most obvious steps in municipal betterment is to do away with unnecessary, unsightly objects. The billboard has been unsightly so long that many people regard it as permanently evil. At all events, it is clear that if it is to remain it can only do so under much better conditions than now obtain, and it must be supported on broader grounds than the fact that a handsome advertising business has grown up through its promotion. No business can be successfully promoted by improper means; the billboard, glaring and staring at every point, approaches the limit beyond which business should not go. Its misfortune has been injudicious use.

The Observer's Note-Book

"Ghost Flowers"

THE OBSERVER often wonders at the suggestions put forth for household decoration and adornment. So many people want something "new" or "novel" that the very strangest ideas are brought forth for the instruction of the uninitiated. It is true that many of these ideas are neither new nor novel; but very ancient suggestions are often brought forward, dressed up afresh and served to a startled world as the very latest of late things. Now here is Mrs. Candace Wheeler, who ought to know how to arrange and decorate a house as well as anybody, coming forth with an earnest plea for—of all things in the world—the seed globe of the dandelion flower!

It is a theme worthy of the deepest eloquence. Every one knows the inherent charm of the dandelion flower, of the ravishing beauty of its golden color, that brilliant testimony to the arrival of spring! Every one knows the great economic value of its twisted stems in the hands of very young children, although not every one is aware of the delicate salad that may be made from its leaves. Every one knows, also, of the graceful form of its seed globe, and the wonderful means that Nature has taken for the reproduction of a plant which, given a flower of real grace, has no apparent object in its growth. All these matters have been known to all men and women for lo, these many years. But Mrs. Wheeler does not regard that as sufficient. There is, she thinks, beauty in the seed globe of which most people are unaware, and she puts herself forward as the high priestess of the dandelion seed in a few sentences that scintillate with brilliant suggestion.

The Observer gives way, and begs she will speak for herself. "Nothing in plant nature," she says, "is more beautiful, more ethereal, more delicately suggestive of spiritual existence in the blossom world, than a fully developed seed globe of the dandelion flower. One thinks of it as a plant aspiration, a floating flower thought, something that stands before the vanishing point of matter.

"If these tender manifestations are carefully transported to the house and placed in water they will continue for days, waiting for the delayed air current which should waft them to some sheltered bit of earth where they may lie until time and golden weather combine to start them upon a new stage of existence. Ten or twenty of these winged things gathered into a tall Venetian glass surrounded by newly grown maidenhair ferns will give one a new ideal of refinement in flower arrangement. Of course, the ferns are sure to shrivel and curl before many hours are over, and will require several renewals, but the dandelion ghosts will stand bravely on until their lengthened days are numbered."

This is very nicely put. It is a practical suggestion in household decoration which any suburbanite may avail herself of, encased in graceful diction, and written in a very charming and polished manner. It is a household decoration that gives no trouble, for the seed globe may be plucked from any roadside, or even gathered from the center of a cherished lawn. The dandelion requires no cultivation, but grows with such persistency that a particularly large choice specimen that has been uprooted from a conspicuous spot often seems growing with renewed vigor the next day after. Mrs. Wheeler is a woman of many ideas, but was there any real necessity for singing the praises of the dandelion, its flower and its seed?

The Garden

The Garden Month by Month—September

THE first of September finds the flower garden in full swing of late summer and early fall blooming. It is gay with color and rich in the thick, strong foliage of the summer's growth. Save for the completeness of the maturity there is no hint of impending changes. The climax toward which all the summer's labor has been directed seems to have been reached. The breathing spell in work that came with August seems likely to be continued indefinitely.

Yet September is one of the busiest months in the year. It is the month of preparation for the fall and winter; not, as yet, in clearing up and in putting away, but in busy effort for the house plants for the winter. Some of these will have been started as far back as the end of June, when the roses for winter blooming will have been planted in the greenhouses, and which will have made excellent progress by early September. But there are many plants which now require attention, and the amateur gardener will find September one of the most active of months.

All sorts of things must be done, and many of them quickly. The warm days of early fall are delusive, especially in the North, where frosts are liable to arrive any time after the middle of the month, and with no previous notice. All plants for the winter window garden must be early put into pots and in place before the fires are started, in order that they may become accustomed to new conditions of growth. This is, perhaps, the first thing to be done, and it can hardly be begun too early. Very early, also, must the chrysanthemums be lifted, first cutting around them with a sharp spade a week or so before taking them out. Fertilizer should not be applied to these plants until they have begun to grow; afterward it should be applied twice a week.

The great work of September is concerned with bulbs. The beds should be prepared early, and be well made, with ample allowance of old cow manure. The best bulbs should be reserved for house growth. They should invariably be purchased as early as possible in order to obtain the best stock. Roman hyacinths, crocus and madonna lilies should be planted early. All bulbs should be well covered; a foot at least of leaves, litter straw and the like is none too much.

A variety of other plants now require attention. Hydrangeas should be cut back after blooming, and growth encouraged in every way. Each stalk or stem means a new flower next year if the plant is in good condition. Azaleas should be taken into the house before frost threatens. Pansies, hollyhocks and other perennials grown from late sowings should be replanted in permanent positions. The sowing of pansy seeds must no longer be delayed, if it has not been done before, which would have been better. Dormant callas should now be started into growth with enriched soil and plenty of water.

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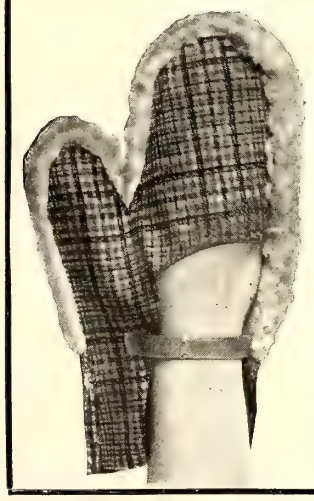

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THE ARCHITECT AND HIS CHARGES

(Continued from the August Number)

ENGLISH SCHEDULE OF CHARGES—*Concluded*

4. When several distinct buildings, being repetitions of one design, are erected at the same time from a single specification and one set of drawings and under one contract, the usual commission is charged on the cost of one such building, and a modified arrangement made in respect of the others; but this arrangement does not apply to the reduplication of parts in one building undertaking, in which case the full commission is charged on the total cost.

5. If the architect should have drawn out the approved design, with plans, elevations, sections and specification, the charge is two and one-half per cent. upon the estimated cost. If he should have procured tenders in accordance with the instruction of his employer, the charge is one-half per cent. in addition. Two and one-half per cent. is charged upon any works originally included in the contract or tender, but subsequently omitted in execution. These charges are exclusive of the charge for taking out quantities. Preliminary sketches and interviews, where the drawings are not further proceeded with, are charged for according to the trouble involved and time expended.

6. Should the client, having approved the design and after the contract drawings have been prepared, require material alterations to be made, whether before or after the contract has been entered into, an extra charge is made in proportion to the time occupied in such alterations.

7. The architect is entitled during the progress of the works to payment by installments on account at the rate of five per cent. on the amount of the certificates when granted, or alternatively on the signing of the contract, to half the commission on the amount thereof, and the remainder by installments during their progress.

8. The charge per day depends upon an architect's professional position, the minimum charge being three guineas.

9. The charge for taking a plan of an estate, laying it out and arranging for building upon it, is regulated by the time, skill and trouble involved.

10. For setting out on an estate the position of the proposed road or roads, taking levels and preparing drawings for roads and sewers, applying for the sanction of local authorities and supplying all necessary tracings for this purpose, the charge is two per cent. on the estimated cost. For subsequently preparing working drawings and specifications of roads and sewers, obtaining tenders, supplying one copy of drawings and specification to the contractor, superintending works, examining and passing accounts (exclusive of measuring and valuing extras and omissions), the charge is four per cent. on the cost of the works executed, in addition to the two per cent. previously mentioned.

11. For letting the several plots in ordinary cases the charge is a sum not exceeding a whole year's ground rent, but in respect of plots of great value a special arrangement must be made.

12. For approving plans submitted by the lessee, and for inspecting the buildings during their progress, so far as may be necessary to insure the conditions being fulfilled, and certi-

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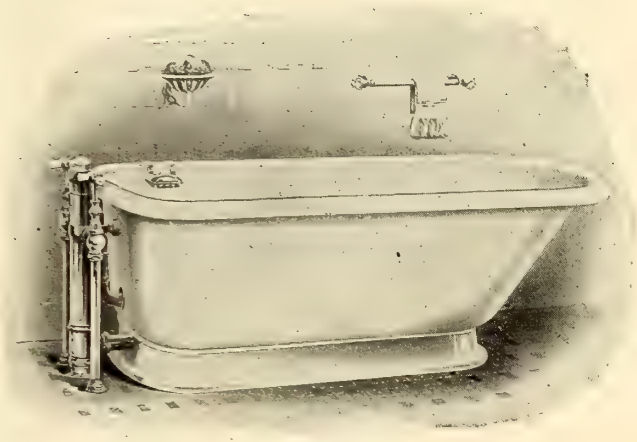

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Bound Volumes of the Scientific American Building Monthly

Volume IX., January to June, 1890, price $2, has twelve colored plates, fifty-six illustrations of houses with their plans, and fifteen pages of details drawn to scale. The houses vary in price from $1,200 to $7,000.

Volume X., July to December, 1890, price $2, has twelve colored plates beautifully executed, fifty half-tone engravings of houses in both city and country, and there are fourteen plates of details. Several small churches are also illustrated. The houses vary in price from $900 to $5,000 and over.

Volume XI., January to June, 1891, price $2. The volume contains twelve colored plates of great merit. There are sixty elevations of houses, churches, stables, carriage houses, accompanied by several plans. One house in this number cost only $695.00; the other houses range in price up to $10,000.

Volume XIII., January to June, 1892, price $2. As in the case with the other volumes, there are twelve colored plates; sixty-two houses varying in price from $2,800 to $25,000, and a number of chapels and churches, and also one schoolhouse. This is a particularly interesting volume.

Volume XIV., July to December, 1892, price $2. The twelve colored plates of this issue are very attractive. There are fifty-seven elevations of houses, churches, and stables, each accompanied by a plan giving the sizes of the rooms. Some city residences are illustrated. One of the houses illustrated cost $1,000 and one $1,650, and the other houses vary in price.

Volume XV., January to June, 1893, price $2. Twelve colored plates form an interesting feature of this volume. There are fifty illustrations and plans of houses, churches, stables, etc. The houses are of all prices, ranging from those which are comparatively inexpensive to elaborate residences costing several thousand dollars.

Volume XVI., July to December, 1893, price $2. There are fifty-two engravings of houses, churches, etc., and each is accompanied by a plan. Some of the houses in this volume are as low in price as $600. The thousand dollar workingman's home at the World's Fair is also included in this volume.

Volume XVII., January to June, 1894, price $2. In addition to the twelve colored plates, there are sixty views of attractive houses from $2,000 up.

Volume XIX., January to June, 1895, price $2. It has the six highly artistic covers bound in. There are sixty-six engravings of houses of all prices, from $2,000 up. One of the most attractive volumes in the series. Two churches are also included in the volume.

Volume XX., July to December, 1895 price $2. It contains six colored covers, seventy photographic illustrations of exceedingly fine houses, a couple of churches, stable and a windmill.

Volume XXI., January to June, inclusive, 1896, price $2. There are six colored covers, ninety-two engravings made from photographs of houses taken specially for the purpose. The illustrations include churches, libraries and other buildings.

Volume XXII., July to December, 1896, price $2. It includes six artistic covers showing the actual appearance of the houses as regards color. There are also one hundred and one exterior and interior views of modern houses, from $1,950 up. City houses, churches, mausoleums, etc., are also included.

Volume XXIII., January to June, 1897, price $2. In addition to the six colored plates there are one hundred and seven interior and exterior views of the latest types of houses by prominent architects. The miscellaneous matter includes a village hall, several libraries, a gate lodge, schools, hospital, etc.

Volume XXIV., July to December, 1897, price $2. It includes six attractive colored plates. There are one hundred and four photographic illustrations of houses, including many interiors. A considerable number of public buildings are also illustrated.

Volume XXVI., July to December, 1898, price $2. Nearly a hundred large scale illustrations of the exteriors and interiors of modern houses will be found in this volume. There are also clubhouses, gate lodges, etc. There are many examples of foreign architecture scattered through the book, and sculpture is not neglected.

Volume XXX., July to December, 1900, price $2. The colored plates are particularly fine, and the half-tone illustrations of houses and interiors are very artistic. The literary contents and the drawings of details add to the value of this volume.

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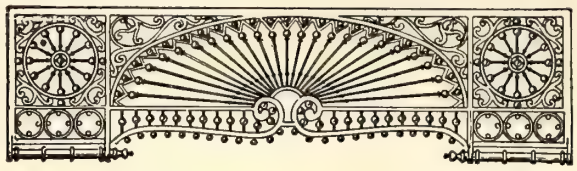

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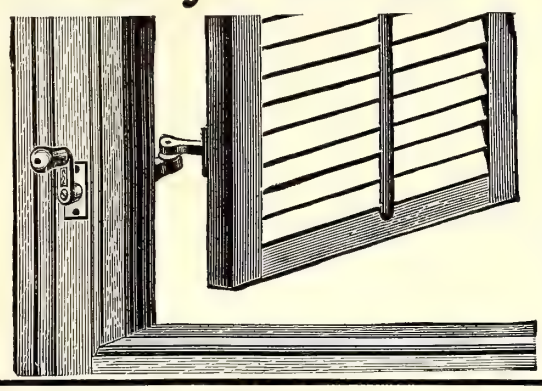

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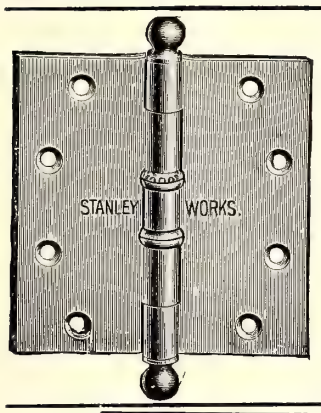

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18. When an architect takes out and supplies to builders quantities on which to form estimates for executing his designs, he should do so with the concurrence of his client, and it is desirable that the architect should be paid by him rather than by the builder, the cost of such quantities not being included in the commission of five per cent.

It will be observed that in the American schedule the percentage is designated as a "minimum" charge. In the British schedule we are told that the "usual remuneration" for an architect's services is a commission of five per cent. As a matter of fact five per cent. is the usual charge; an architect who accepts a commission below this figure commits a grievous non-professional act which deprives him of good professional standing, and which should at once disqualify him from membership in his national professional organization. How far penalties in such matters are inflicted is not generally known.

With such exceptions there is no lessening of the rate below the set five per cent. The architects have fought and fought for this figure for years. The records of the early deliberations of the Institutes are strewn with endless discussions of the necessity for five per cent., and with countless arguments why no lesser sum should be charged. There is not so much discussion on this point now as formerly, because the moderateness—the comparative moderateness—of the charge has been universally recognized. At the present moment there is a lull in the discussion; but with the cost of living advancing, and with higher charges for everything except street car fares and boot blacking, it can not be long before our architectural minds apply themselves to the noble art of further compensation, and architects' fees go up like everything else.

On work of comparatively small cost a higher rate of compensation is to be expected and is specificially allowed in the schedule. The American schedule specifically allows an

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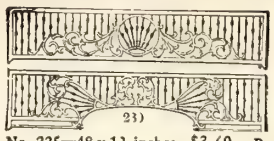

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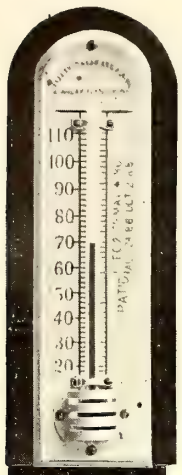

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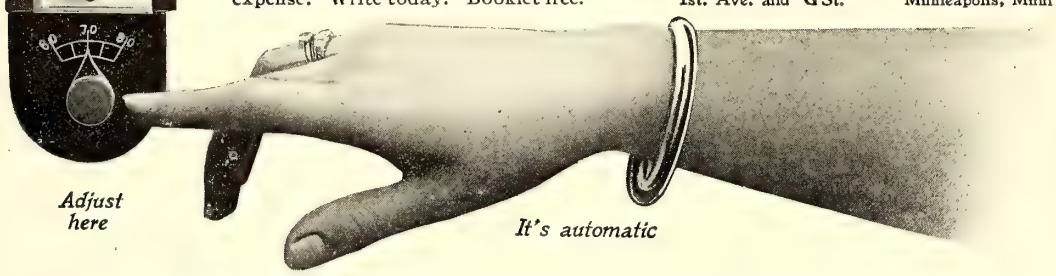

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increased cost on work costing less than $10,000; the British schedule recommends it on work costing less than $5,000. The provision is a reasonable one. Five thousand dollars is a moderate price for a house, a figure that is not exceeded by many houses, and five per cent. on this amounts to but $250, a sum much too small to cover the work the architect has to do, without taking into account compensation for his training and his brains, to say nothing of his personal taste and skill.

But in buildings of large cost the five per cent. charge yields a handsome income. On a building costing $1,000,000 the architect's fee would be $50,000. A very prominent practitioner in New York, a man whose work has been largely, and very largely, in buildings of great cost, figures that in a building that yields him a commission of $50,000 his profit would be half; in other words, he would make clear and above his expenses the handsome sum of $25,000. As this particular architect could build a half dozen or a dozen of such buildings in a year, he could readily make a profit of several hundred thousands of dollars annually for as many years as the business could be had.

It is apparent, therefore, that architecture is a well paid and a highly paid profession. But only in exceptional instances. The architectural directories enumerate about five thousand architects engaged in practice in the United States and Canada. Only a very small proportion of these gentlemen earn incomes from their profession which can rightly be called great. The average earnings of the average architect are often pitifully small, and even many in command of good practices complain of the meagerness of their compensation and the slightness of their incomes. The income to be derived from a practice composed of building small houses is very insignificant compared with the effort put forth and the labor involved, and this is true even if the architect charge a greatly enhanced percentage. In most cases this is not only impossible, but is simply not done.

It is the erection of important buildings which brings large fortunes to the architectural practitioner, great office buildings, splendid country houses, and important public buildings, as a large museum, a city hall or other civic structure. Work of this description, to be well handled—and it can be touched in no other way—requires the labors of a very large office force. There are several large architects' offices in New York which employ more than a hundred men, the largest offices in the country, save perhaps one or two in Chicago. These men are chiefly draftsmen, and must be highly skilled in their work. The number employed varies somewhat from time to time, according to the work in hand. Sometimes an effort is made to employ as many of them continuously as possible, and the best results can only be had when this is done. In other instances the men are employed and discharged as work comes in and is finished, a system that is necessarily demoralizing to esprit de corps, but which seems unavoidable unless a very large line of large work is obtained.

A huge income is needed to keep such a force busy; moreover, a certain sum must be set aside for retaining the chief men, the heads of departments, the most useful members of the force, and other indispensable men who must be retained whether there is work to be done or not. In view of such contingencies it is obvious that the two and one-half per cent. of actual cost allowed by the eminent practitioner above referred to is by no means an unfair amount, and it might readily fall below the sum needed for office expenses only.

Thus far the discussion has been limited to the somewhat abstract presentation of the

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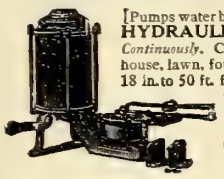

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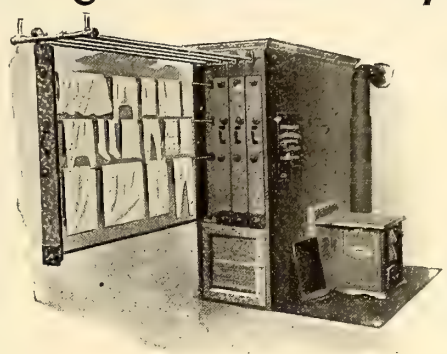

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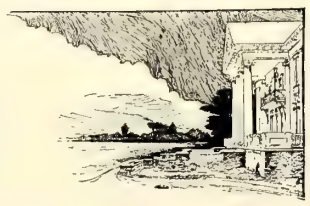

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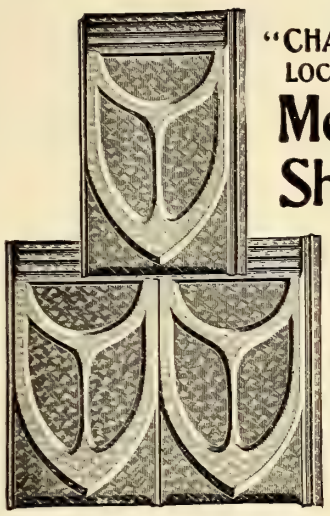

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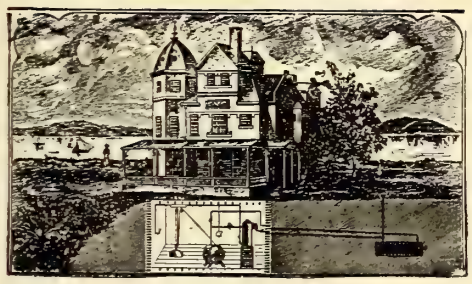

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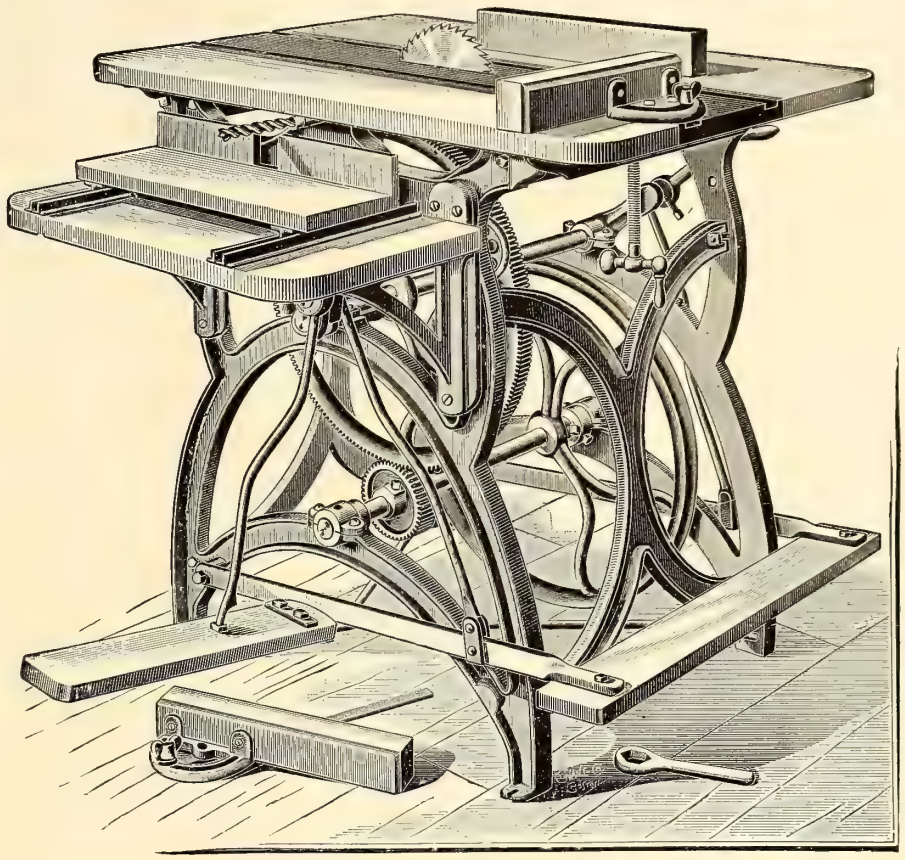

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10. The Prevention of Drafts

IN order to prevent the production of drafts in the ventilation of rooms the movement of the incoming air must be slow and gentle; it must be agreeable in temperature, and its humidity must not be too great nor too low. The conditions which cause draft are (1) too great rapidity of current, (2) too low a temperature, (3) excessive or (4) insufficient humidity of the air. The current of air should be broken up as much as possible by subdividing the openings of both inlets and outlets, especially the inlet openings.—Dr. D. H. Bergey.

11. Attics

ALTHOUGH attics with sloping ceilings are placed in the roof for economy, they are bad from a sanitary point of view, because of being extremely cold in winter and hot in summer. Care must, therefore, be taken to keep an air space between the ceiling of the room and the outer covering of the roof, or, if the whole of the room is in the roof, to fill in between the rafters with slag wool and to place roofing felt or building paper under the slates or tiles. In all cases it is advisable to have rough boarding and not battens under the slates, the continuous wood surface forming a non-conducting material. The eaves of the roof should project so as to protect the wall from rain, and the latter should not be allowed to run down the walls and make them damp.—B. F. and H. P. Fletcher.

NEW BOOKS

The Art of Wood Carving

EASY LESSONS IN THE ART OF PRACTICAL WOOD CARVING. By Fred. T. Hodgson. Chicago: Frederick J. Drake & Co., 1905. Pp. 284. Price, $1.50.

This book has been prepared for the carpenter, joiner, amateur and professional wood carver. It attacks the subject from the point of view of the practical wood worker. It is not an art text-book, but a practical handbook that appeals to a very large class of workers in wood.

The lessons given in this book commence at the very beginning of carving, and lead the young workman by easy steps through the mazes of the art, until he is able to turn out work of a creditable character. The use and care of carvers' tools are given and explained, and the tools described and shown by illustrations, with methods of sharpening and honing the tools. All sorts of appliances are shown, described and illustrated for holding the work and for preparing the tools and finishing up the carvings. The various styles of carving are fully described, such as flat carving, chip carving, incised carving, scratch carving, figure carving, carving in relief, round carving and jewelry carving. Lessons are given in each one of the styles, and also a description of the tools used and methods of using them. A chapter on the kinds of wood

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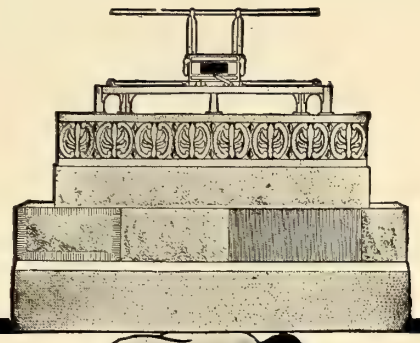

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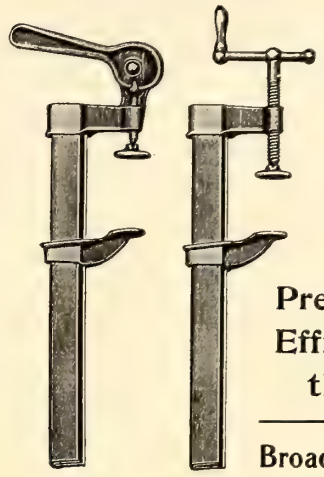

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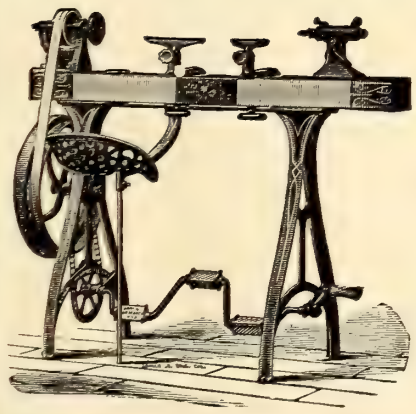

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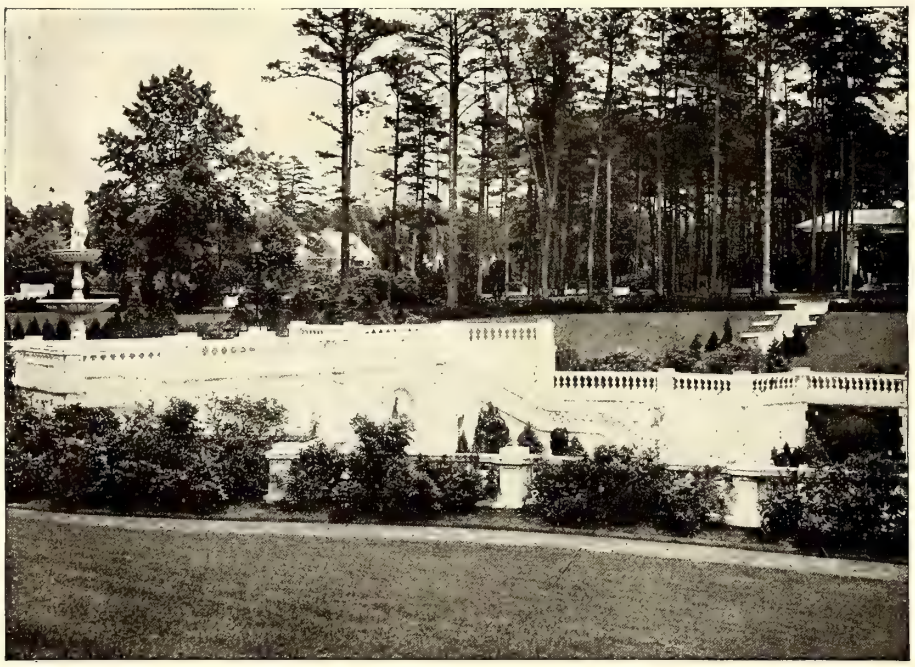

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The book is a treatise on wood carving, and is not concerned with the manufacture of furniture, nor with practical applications of carved surfaces. The author's purpose is to show how a carved surface may be produced or a piece of carving in relief. This is an important subject in itself, and quite sufficient to form the theme of a single volume. This book is largely made up of articles contributed by its author to sundry technical journals, but entirely rewritten and newly arranged. The descriptions of the tools and methods are concisely given, and the book will be found of peculiar value to the wood worker.

The Scented Garden

THE BOOK OF THE SCENTED GARDEN. By F. W. Burbridge. London and New York: John Lane, 1905. Pp. 16-96.

This little book, which forms one of the Handbooks of Practical Gardening brought out by Mr. Lane, deals with a novel and interesting subject. The important part taken by flower odors in their relation to insects has long been the subject of scientific investigation and research, but Mr. Burbridge touches on this aspect of the question only in a slight degree. His theme is the much more subtle and delightful one of growing and arranging scented flowers as a source of pure joy and delight, and he develops this interesting argument in a thoroughly interesting and fascinating manner.

Mr. Burbridge argues eloquently for an inclosed garden and a garden house. His inclosed garden is something quite different from a garden surrounded with a fence or wall, but a sort of "holy of holies," being at one and the same time a wind-sheltered sun-trap and a site for a garden house sacred, as it were, for one's own children and to our most intimate friends. This he designs to be a garden of sweet-scented plants and flowers, a "garden of spices." The idea is a beautiful one. The planting of flowers and plants for scenic effect, for masses of bloom and foliage, is an art already brought to a high degree of perfection and development; but the present author goes further, and points out, with quite ample illustration and with keen and happy suggestion, the value of growing plants for their perfumes, and the pleasure that may be obtained from a garden devised for this especial purpose.

Yet a list, he adds, however complete, of fragrant flowers and leaves, would not help much in the real art of making a sweet-scented garden. It must be an evolution or real growth, an individual development, and not a mere suggestion or copy of a garden elsewhere. The point is a valuable one, and is quite as helpful in application to a garden arranged in the usual manner as to one especially planted for his scented odors.

The book includes, among much other interesting matter, a brief chapter on the spice islands of Europe, receipts for potpourri, an A B C list of perfumes, essential oils, etc., and the plants which afford them, together with helpful bibliographies on the general subject of scented plants. The list of perfumes is exceedingly full and very complete. The book is of real value and is extraordinarily suggestive.

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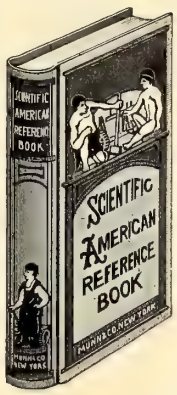

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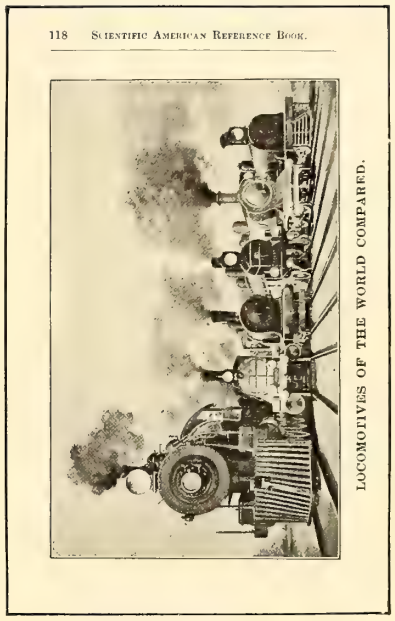
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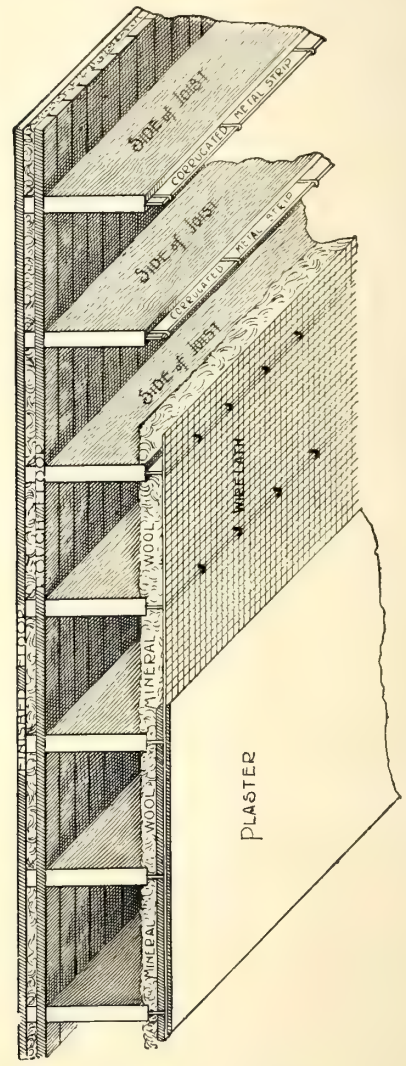
A MATERIAL that has the power to resist the transmission of heat and cold, by holding in confinement a right proportion of air, is secured for builders of homes by the use of mineral wool. It protects against frost, fire, sound, insects, rodents and germs, and furnishes the comforts of seasonal warmth and coolness and extreme dryness. Mineral and organic fibers form its basis and it is made into constructional consistency by converting scoria and certain rocks while in a melted condition to a fibrous state. Analysis of the wool shows it to be a silicate of magnesia lime, alumina, potash and soda, and consequently it will not decay or become musty, nor yield nourishment to insects and vermin. The application of mineral wool is shown clearly in the accompanying engraving. In working on a specification of such a ceiling the operator

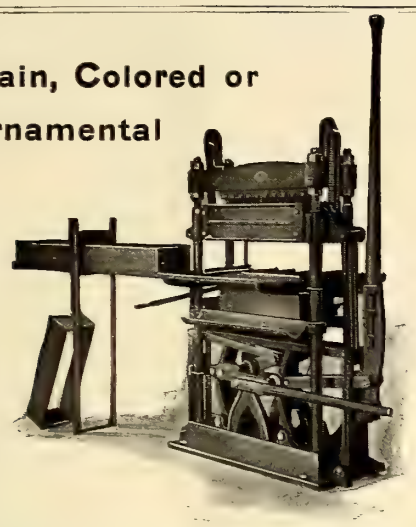


SEMI-FIREPROOF CONSTRUCTION.

begins to fur below the bottom of each joint, longitudinally, with a metal furring strip not less than one inch wide; the strip, if corrugated, to be of No. 20 gage band iron, and if not corrugated, No. 10. After fastening the furring strips, lath the ceiling with metal lath. The lath must be put on running crosswise of the joists; and fill on top of the lath with two inches of the wool. The furring strips and lath should be fastened in place with staples long enough to drive at least one inch into the joists. Any kind of wire or metal lath can be used with this ceiling. Lath with an open mesh, such as the Roebling or expanded metal lath, can be put on with the least trouble, for the reason that the staples can be driven more readily. Mineral wool is placed upon the metal or wire lath, carefully packed underneath the joist, and extended up between

10 Pressed Cement Brick AT ONE OPERATION

Plain, Colored or Ornamental



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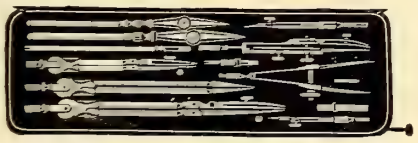

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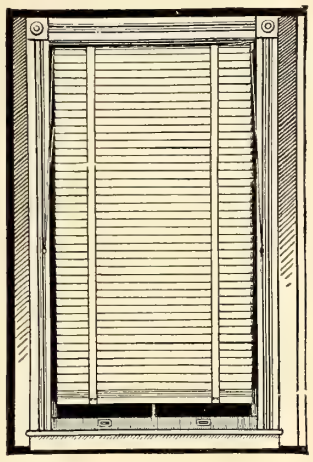

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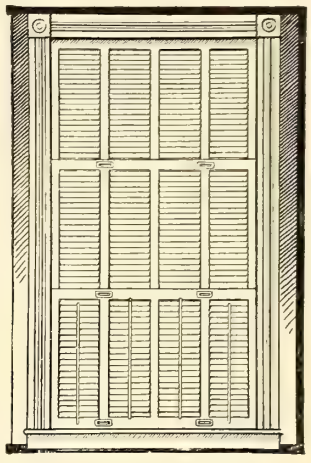

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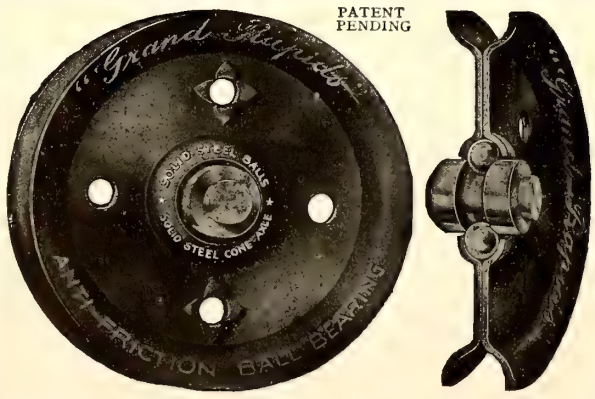

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them to any desired height. The wool should be put in place before plastering, and it will be found the most economical to do this when the lathing is done. The lath is plastered underneath, as usual. Mineral wool is soft and pliable, and the plaster forms a perfect key when applied after the wool is placed. This material is entirely non-combustible, and no degree of heat possible in a burning building will consume it. The plan of construction here illustrated and described will make a structure practically fireproof. This form of construction also thoroughly deafens the floor and ceiling, so that sound will not pass through them. By placing the wool on the ceiling, the floors are deafened better than by any other process, as the ceiling is disconnected from the joists, and the deafening material is under the same. The form of construction can be still further carried out and improved by laying a rough floor on top of the joists and stripping them, and placing mineral wool between the strips the thickness of the latter, and then laying the finished floor. The wool in the ceiling will prevent a fire reaching the joists or open space between them from below, and the wool in the floors will stop a fire from burning down from above. The United States Mineral Wool Company, No. 143 Liberty Street, New York, N. Y., manufactures the material. The use of it in floors, walls, partitions and roofs, for apartment houses, flats, dwellings and general buildings, is very fully treated in an illustrated brochure issued by the firm, under the title, "The Uses of Mineral Wool in Architecture," and is sent on the application of any one interested in the fiber.

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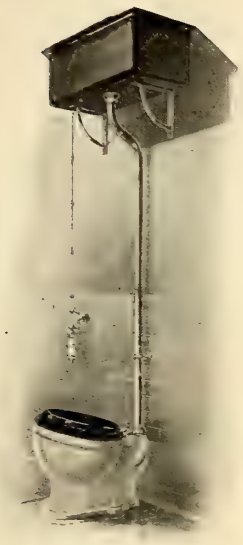

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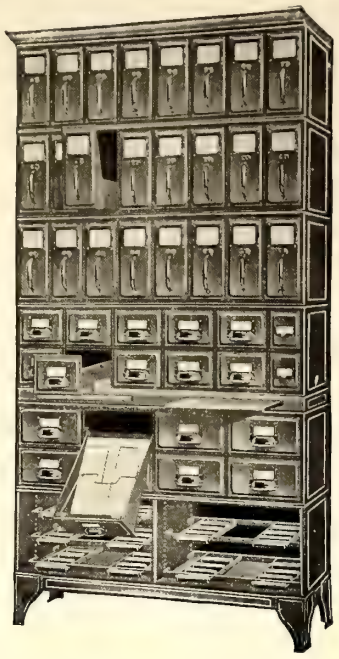

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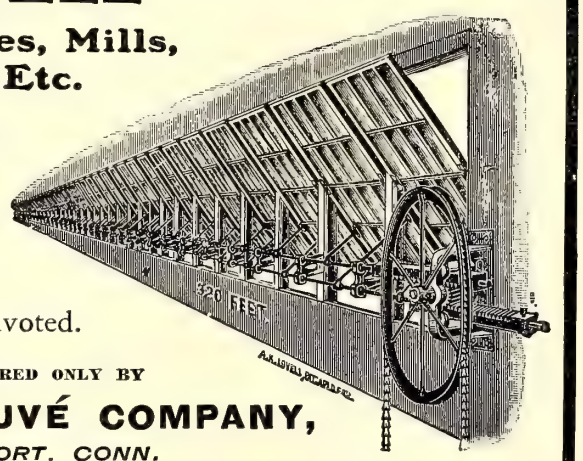

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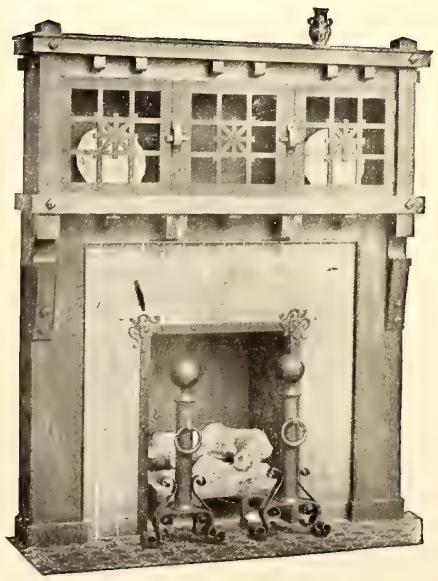

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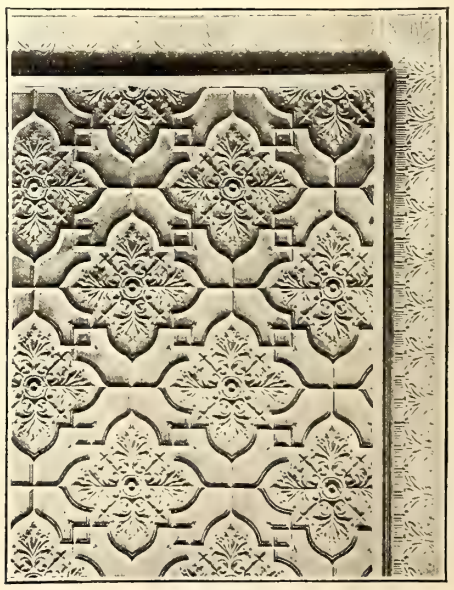

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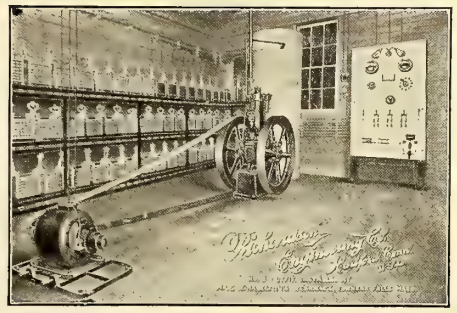

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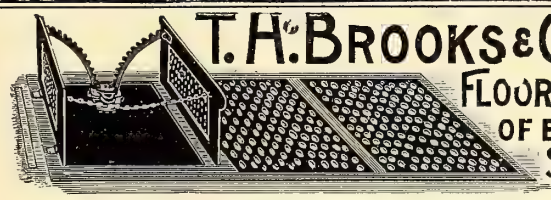

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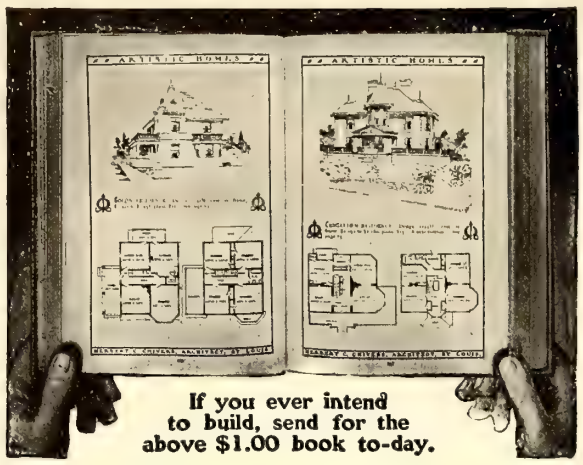

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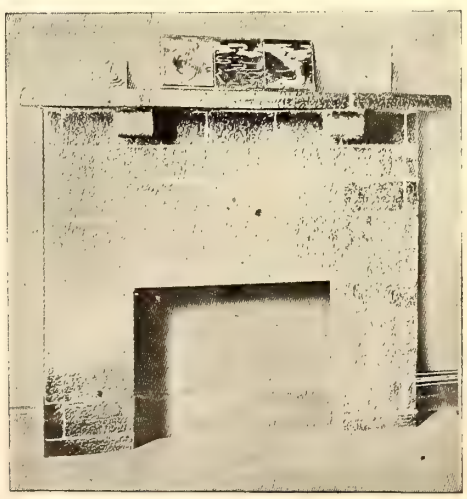

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print copy of the ceiling plan is then sent to a customer, showing the arrangement of the patterns, the spacing of the furring strips, sections of the cornice and list of the items of each room. The painting of all this material is done with pure white zinc, linseed oil and turpentine, on each side after stamping and trimming, leaving no raw edges. The lasting qualities of a steel ceiling depend entirely upon this prime coat, the manner in which it is applied and the kind of paint used. The walls and ceilings can be put up by carpenters. An example of ceiling of the charming "English" pattern is given by the preceding illustration. It is particularly adapted for a dining-room or library of a residence, although very suitable for many larger rooms. It is usually placed diagonally, and can thus be used in rooms of any shape. This pattern is made in sheets 24 x 96 inches, by the Northrop, Coburn & Dodge Co., No. 40 Cherry Street, New York, N. Y., and fairly represents the style of ceilings made by this firm. Its catalogue No. 8 contains beautifully illustrated specimens of these steel stamped ceilings, and one may wonder if the limits of witchery in ornate design have not been reached in such as these for such a purpose. The company also manufactures metal stair wainscoting and tile for bathrooms.

A Shock Absorber for Automobiles

ONE of the principal reasons that so many wealthy automobilists leave this country to tour in their cars is the bad state of our roads as compared with those abroad. A device which has been on the market for over a year, and which has received a thorough test on the racing cars in the last two international contests for the Bennett Cup, is a shock absorber known as the Truffault-Hartford Suspension. This apparatus consists of two steel arms, suitably pivoted to the frame and spring of the car, just over the axle, and connected together through a friction disk arrangement which acts as a brake on the spring and checks its rebound. The result is that when passing over obstacles or dropping into gullies the wheels of the car quickly regain the ground and remain upon it a much greater percentage of the time than they do ordinarily, thus doing away with loss of traction and a great deal of abnormal wear on the tires, which is the result of slipping. The principal advantage, however, is the entire lack of rebound of the car body and the consequent easy-riding qualities which ensue. When the machine drops into a hole its occupants feel the vehicle settle down, but instead of being shot upward into the air the next moment, they experience no further jolt. A car equipped with this device can consequently be driven at a high rate of speed on rough roads without danger of breaking springs and without serious discomfort to its passengers. Fully a twenty-five per cent. increase of speed is easily possible. Furthermore, the mechanism of the car is not subjected to such severe strains as it otherwise would be, with the result that its life, as well as that of the tires, is perceptibly increased. In time, without doubt, this device will be found not only on all high-speed pleasure vehicles, but also on commercial cars and railway locomotives as well, for it is an apparatus that soon pays for itself in the reduction of wear and tear which it causes. A demonstration ride which the writer had on a car fitted with the Suspension, and afterward with it removed, was most convincing, the difference in comfort between the two being about the same as that between a Pullman and a freight car.

OCTOBER
1905

AMERICAN HOMES AND GARDENS

Vol. I
No. 4

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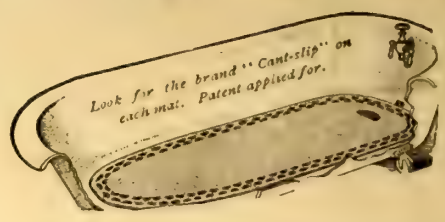

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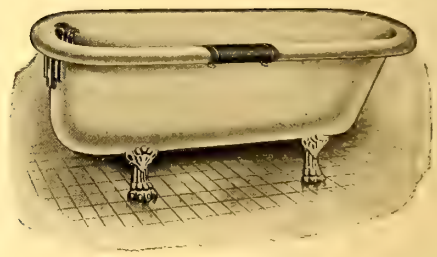

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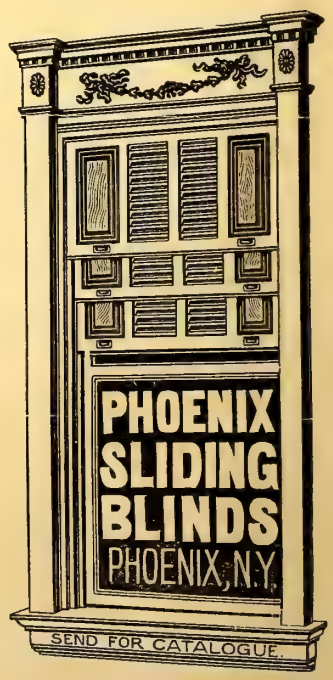

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A Garden in Old Japan

INDEXED

AMERICAN HOMES AND GARDENS

Volume I October, 1905 Number 4

"Drumthwacket"—The Steps in the Garden

Monthly Comment

THE booming of Newport has been one of the novelties of the past summer. No place in the world seems less in need of general advertising, for its fame is very great and very present. A spot of historic interest belongs to the past, and events concerned with it belong to times that are gone; but Newport is with us, if not exactly every day, at least so constantly that when it is not actually in the public eye many people are thinking of it, and the summer history furnishes food for talk and thought during many a long winter month. Why, then, is not this sufficient? To the outsider it seems ample, but to the good folk of Newport it appears that much may be yet done in attracting people to its borders. A deliberate attempt has, therefore, been made to bring people of moderate means to Newport. That the rich have settled there, settled with an abundance of costly dwellings, is known to all men; but it seems this goodly company of the exclusives is not sufficient for the pride of the summer capital. It has been imagined that less wealthy people might make a better class of residents, who would stay longer, and perhaps spend more money, in proportion, than the rich settlers. Accordingly Newport has been boomed, and boomed to a considerable extent. It is as yet too early to note the results of this campaign, which can not be agreeable to the wealthy residents, who, after all, have made Newport what it is. Whether it will result in the destruction of Newport's present exclusive, high-priced atmosphere remains to be seen. The results of such a campaign may be quite different than what its promoters anticipated.

THE booming of towns by concerted advertising has long been a favorite American enterprise. It varies according to the ends sought and the conditions of the locality. Some towns are boomed for manufacturing purposes, and even Newport did not escape this penalty of fame a few years since, only to demonstrate that it was not suited for manufacturing purposes. Other towns are boomed as residential sites; others for general conditions, or as summer and winter resorts because of their various attractions. The latter form of advertising is the most favored in the East, where its necessity is the more felt, and its value, both to the advertiser and the person responding to the advertisement, is more quickly seen. In the West it is the manufacturing advantages that are most generally advertised. All of these things are fine examples of the value of advertising, and good instances of the necessity of being ready to say a good word about oneself.

THE approaching destruction of the earliest steel cage building in New York, that its site be utilized for the erection of a high building, is one of the most interesting illustrations of the rapidity of modern changes in building construction that has been recorded for a long time. The structure in question is the Tower Building, built by Mr. Bradford L. Gilbert only seventeen years ago, a building ten stories in height, which it is now proposed to replace with one of twice this altitude. It shows not only how rapidly our ideas concerning large and tall buildings are extending, but it also shows the great value of real estate in lower New York when a building perfectly sound in construction, filled with tenants and presumably returning an income on the capital invested, can be torn down to make way for a larger building which will certainly be more expensive to build. As to the profitableness of the new building, that is a matter in the future, but it is apparent that the new venture would not be made did not competent judges regard it as a good business investment.

THE formation of a mounted State constabulary by Pennsylvania, as established by a law adopted by the last Legislature, is a significant and important movement, the development of which will be keenly watched not only within that commonwealth, but by all rural communities throughout the country. The lack of police protection outside the cities is one of the most serious evils of American life. It has encouraged crime by the failure to provide means for protection and detection. It is the first and greatest duty of the State to protect its peoples, for the greatest safety lies in giving such adequate protection that the fear of detection and punishment will prevent the commission of crime. The difficulties of protecting great stretches of rural land, such as form the larger part of America, are, of course, very great; but the dangers of non-protection have, each year, become greater and greater, and the necessity of taking some adequate steps has long been apparent. Pennsylvania has taken the lead in this movement, and its subsequent development will be watched everywhere with the deepest interest. In a measure, these first steps will be largely experimental; at least, it is not proposed to police the entire State at once, but to begin in a modest way—the initial appropriation is but $425,000—and to develop the work as its value is shown and the means can be obtained to defray the expense.

THAT the Woman's Club has developed into a "movement" has been apparent for a number of years. It is not only a movement, but a dignified movement; one of great usefulness and value, commanding and absorbing the thought and time of many persons, to whom it has opened new ways of activity, new modes of thought, given new ideas and led to more useful lives. It has taken men a long time to understand that there was any real basis of value in the Woman's Club. The typical man's club is one for social intercourse. The Woman's Club presented something different. Here was a frantic searching of the encyclopedias in the preparation of abstruse papers on every conceivable theme. Fair ladies who, but a month or two before, knew of Shakespeare only as a great name, suddenly burst upon an amazed environment as the authors of learned Shakespearian disquisitions. Literature was ransacked from beginning to end; history also, and travel; a general inquisitiveness sorted out the whole knowledge of the world, and served it up of an afternoon with tea and cake. It was hard to convince a mere man that there was real value in any of this, or that the good ladies were, in any true way, contributing to the learning of the world or even ministering to their own happiness. Then a change swept over affairs. From past times the Woman's Clubs emigrated to the present. They began to concern themselves with the life and the things around them. The magic word "reform" became the battle cry, and the students of history and of literature became leaders in all manners of good works. This saved the Woman's Club, and has made it one of the most useful of modern agencies for betterment. Not all of this new energy has been wisely directed; not all of the reforms proposed have been wise or desirable: there has been much done that need not have been done, and the world is much too busy to tolerate the unnecessary. But, on the whole, the later developments of the Woman's Club have been for good, and for good alone.

Notable American Homes

By Barr Ferree

"Drumthwacket," Princeton, New Jersey: The House and the Estate

NEITHER the real estate speculator nor the land boomer has yet seized upon the beautiful town of Princeton as a scene for his operations. This is a fortunate circumstance, for Princeton has grown and thriven under the most delightful of auspices and in a most delightful way. Rarely has academic culture had a more beautiful site for its physical development, and rarely has it developed in a more charming manner.

The charm of Princeton is so penetrating that it may be felt by the most casual visitor and appreciated by the most indifferent observer. The most ignorant of travelers would know it was a university town, for on the instant of his arrival he is confronted with the massive bulk of the great tower of Blair Hall, a beautiful, stately structure that forms one of a great group of dormitories that stretch along the outer border of the University campus until they fetch up against the gymnasium. A splendid group of buildings these, a unit in design, whether they be called Blair Hall, Stafford Little Hall or Gymnasium; an irregular group, ascending and descending, twisting and turning, as the conformation of the land determined; masterworks of Messrs. Cope & Stewardson, the Philadelphia architects, and masterworks of collegiate Gothic in America; a group of buildings that speak, in every stone, of true Gothic feeling and penetrating modernity, the new interpretation of Gothic which must do so much to revive this fine old art that, in its Victorian revival, was so ill used and so little understood.

It is in these and in other new buildings, similar in style and in feeling, that Princeton University proclaims her new architectural supremacy, and which give both the University and the town an interest and a beauty that they have never had before. For, architecturally, old Princeton—the University—had few buildings of interest, however great may be the affection with which they were and are regarded by the older graduates. If the old buildings no longer seem to have interest it is apparent that the new will long maintain theirs—and add to it as decade passes decade.

The University, that meets one at the gate, permeates the whole town. Whether, to the real Princetonian, there be a difference between the University and the town I do not know; but to the chance visitor there is no distinction between the two. It is the University which has made the town, and the town, on its part, gathers around the University as

"Drumthwacket"—The Fountain

"Drumthwacket"—The Entrance Front

children to their mother. And this is the first great fact that the visitor learns. Here is a university town completely isolated between the two great cities of New York and Philadelphia, placed just off the modern main highway—the Pennsylvania Railroad—so remote from its greater neighbors that life within its scholarly precincts must be isolated, whether one will or no—a town nurtured by the University and existing for no other purpose.

But there is no medieval isolation here. Its streets are lined with fine old houses; its roads stretch out amid beautiful country estates; it is an active modern life that is lived here; and over all is the spirit of culture, the guardian of the place, the dominating influence, the force that has made the town and given the University the world-wide distinction it has long possessed. That the town is beautiful, beautifully placed in country gently hilly and much of it deeply wooded, is evident at a glance; but the cultured atmosphere of the University dominates the whole place and gives it a supreme charm. As a mere site, as a beautiful piece of land, Princeton would be delightful to live in; but as the seat of a great university, as one of the most potent culture forces in America, it is ideal.

The University perhaps excites the greater amount of interest among visitors to Princeton, but its historical associations are very large. The battle of Princeton, fought January 3, 1777, put fresh heart into the harassed American forces, added new luster to the military genius of Washington, and gave Princeton and its near-by fields imperishable fame.

This hallowed ground forms part of the estate of "Drumthwacket." It is a beautiful as well as an historic place, comprising about 300 acres. It is, therefore, a property of the first rank in size.

The name "Drumthwacket" comes from two Scotch words, "drum," a hill, and "thwacket," a wood or forest, akin to the English thicket. "Drumthwacket" means, therefore, "the wooded hill." The name was given to the place about 1835.

It is approached through handsome gateways, fine driveways from north and south leading to the house through beautiful stretches of lawn and trees, bordered, for the most part, with flowering shrubs, so planted that some part of these drives will always be enlivened during the season with brilliant blooming.

The house is a stately and beautiful structure, in describing which the word "elegant" naturally comes to the mind. And such it really is, for the central part, with its two-storied colonnade, was built in 1832 by Governor Charles Smith Olden, and has been retained, outwardly untouched, as the center of the present stately mansion of the estate. Governor Olden's house, although generous in size and dignified in proportions, was much too small to meet the requirements of the dwelling house of a large estate planned and arranged in the closing years of the nineteenth century. The problem before the owner and his architect was, therefore, to devise a house large enough for modern needs which would at once include the old mansion and not destroy its integrity.

This was a matter of no small difficulty. There are few things more hazardous than to add onto an old house any considerable addition; it is much more serious when these additions cover twice as much ground site as the original structure, which can in no way be disturbed, and which must not lose its importance nor its individuality. Mr. Raleigh C. Gildersleeve, the architect of the new portions of the house, accomplished his task with extraordinary sagacity and success. At the very beginning of the work it was determined that the original mansion must remain absolutely intact. This having been decided upon, the single remaining problem was to design wings on either side in strict harmony with the design of the original structure. There was perhaps little call for originality in this process, but there was ample need for careful study of the older building, and a very urgent necessity for a study of its style and character, its feeling, its detail. Mr. Gildersleeve's position, as I understand it, was not so much what he would do in extending the

house, but what the original architect would have done had he been called upon to design a larger house and one of the dimensions now decided upon.

This is obviously not only the correct point of view to take, but the only one, and the very admirable way in which the building has been extended is satisfying evidence of its truth. The house has been expanded and extended, therefore, in strict harmony with the older part. The latter is two stories in height, with a low, sloping roof, in the center of which are two large dormers opening immediately above the colonnade, which reaches from end to end of this part. Both the colonnade and the roof have been omitted in the new parts, which are two stories in height, plainly boarded on the outside, but actually, like the older part, built of brick within, surmounted with a severely molded cornice, above which is a pierced balustrade or parapet. These wings are recessed behind the front wall of the old building, but at the end the final pavilions, with plain corner pilasters and pointed pediments, are brought forward. Not all of this work was done at once, and as a matter of fact neither wing is quite alike, the windows of the second story being below the cornice in one and cutting it in the other. The entire front—and the building is elongated in plan, its depth being somewhat shallow in comparison with its great frontage—is thoroughly harmonious, than which greater praise could not be given.

Inside the house the story is somewhat different. The plan of the older part was thoroughly typical of its day, and consisted of a central hall, from which opened four rooms: dining-room and kitchen to the right; two parlors to the left. All of these rooms were small and quite unsuited for the generous hospitality planned for the modernized dwelling and which has since been carried out within it. It was obviously necessary to effect a complete transformation of the interior; but, while unavoidable, it was, at the same time, determined to retain the old style and feeling as far as possible. It is sufficient to add that the interior restoration has been as fortunate and as successful as that of the exterior.

The hall, which opens at the further end onto a porch overlooking the garden, retains a number of its original features. The staircase, beyond an arch supported on paneled pilasters, is new; but the hand rail is thoroughly Colonial in feeling and thoroughly in harmony with the other woodwork. The door frames are decorated with small, carved rosettes and have carved cornices; the superb doors are of solid mahogany. The yellow wall paper and the rugs of deep red laid on the hardwood floor give a distinct charm and gaiety to the hall, with the real quality of a joyous welcome.

On the left is the dining-room, completely occupying the space formerly filled by the old parlor and library; the dividing wall has been removed and the central beam supported on pairs of columns. The original frieze—a delicately modeled band—has survived, and its pattern has been reproduced on the new parts. Architecturally, therefore, the room retains the definite character of the period at which the house was built. Most of the mantelpieces in the old house had been more or less defaced before it came into the possession of its present owner; but the new ones have, in each instance, been very charmingly designed in the older style, and are completely in keeping with the rooms in which they stand.

The dining-room is a green room; the walls hung with green silk, mildly flowered; the window curtains are of green plush; the rug is green. A wainscoting of white wood entirely surrounds the base of the walls, and each ceiling of the two parts forms a single square panel, plainly molded. There are two mantels, one for each part of the room, and the walls are hung with prints and photographs, many of them having direct relation to Princeton. A sideboard—seen in the photograph to the right—once stood in the house of Richard Stockton, the signer of the Declaration of Independence,

"Drumthwacket"—The Dining-Room

which to-day is quite as much a " show place " of Princeton as when it was built, between 1701 and 1709.

On the right of the hall are two rooms, one front and one back, which retain their original dimensions. The front room is a morning-room or reception-room. It is a yellow room, with yellow walls and white wood trim, and yellow furniture with mahogany frames. All of the woodwork and permanent fixtures are original except the mantel, which, for the reason already stated, is new. But behind it, in the chimney breast, are the little side cupboards built by the original builder. The doorways are small and, like the window frames, are surmounted with low, flat pediments.

The adjoining room to the rear is the billiard-room. The walls are a delicate blue; the curtains a light blue velvet; carpet of the same hue surrounds the billiard table, which, owing to the somewhat restricted dimensions of the room, completely fills the center. A door on the side at the further end opens onto an open terrace floored with brick, and of which the furniture—table and benches—are marble.

A triple doorway, one end of which opens from the morning-room, the other two ends from the billiard-room, abutting against the dividing wall, leads to the drawing-room. This is in the new part of the house and is several steps lower than the older part. It is, therefore, a distinctly modern room, very beautifully detailed; the walls are paneled, the doorways are arched, and between the further pair of arches is an elaborately carved Italian marble mantelpiece. The walls are hung with damask of a rich maroon hue, and the curtains and furniture are of the same color. The wall panels, wainscot and other woodwork are painted white.

Beyond the drawing-room is the library. To its cultured owner this is easily the most important room in the house by reason of its fine literary contents, and it is fully that by reason of its great structural beauty. It is designed in the Tudor style, the walls lined throughout with books, save where discontinued for the handsome fireplace and chimney of Caen stone, the ceiling beamed with white panels. The curtains are of green and yellow, the rug green. The bookcases are a part of the permanent fixtures of the room, but it would scarcely be correct to speak of them as built in, for the window frames are built out to their outer edge. The bookcases do not, therefore, extend into the room, but the entire apartment is surrounded with an inner frame of wood, under a part of which are the shelves for the books and under the other part the windows. It is a spacious room, the inner dimensions from frame to frame being about 33 x 21 feet. It is a room that glows with light, so broad and ample are the windows; and it is also permeated with a distinct architectural charm, so agreeable is its form, so well studied its detail, so delightful the effect of the whole. It is a library to live in and to work in, and every part of it speaks aloud the profound interest and affection of its owner, not alone for the room, but for the carefully chosen collection of books which are at once its finest adornment and chiefest treasure. Yet there are other treasures in the room than the books. Most of the furniture is made from ancient oak obtained from an old English school. Just before the fireplace—it can be discerned in the photograph—is a little wooden stand made by James Madison. In one of the bookcases is a tea set that belonged to Dolly Madison, and there

" Drumthwacket "—The Drawing-Room

are other rare objects here, among which a cannon ball picked up on the adjoining battlefield is not the least interesting.

Thence into the garden, which is best approached from the door under the stairs at the end of the hall. One pauses there instinctively for a first rapid glance at the brilliant scene, at the row of fine old trees immediately without, at the graceful terraces with their surmounting balustrades, at the gaily blooming flower beds, at the great fountain which is the center of the whole. It is a lovely and splendid spot, lovely by reason of its varied flowering, splendid in its rich architectural equipment. It was designed and planted by Mr. Daniel W. Langton, in conjunction with Mr. R. C. Gildersleeve, the architect of the house.

"Drumthwacket"—A Gateway

The garden problem was fivefold: the creation of a formal garden in immediate juxtaposition with the house; the adjustment of this garden to the near-by grounds; the planning and arrangement of the other grounds near the house, more particularly those immediately facing the entrance front; the utilization of the forest areas and the making of paths in them; and, finally, a suitable merging of the house grounds into the farm lands which constitute the major part of the estate. Land there was aplenty, presenting a quite excusable temptation to design ornamental grounds on a very large scale. Ample, indeed, these parts had to be, for an estate and a house of such large dimensions. The subsequent development of the grounds shows that exactly the

"Drumthwacket"—The Garden Terrace

right scale was adopted. They are ample as a decorative adjunct to the house, and they are large enough to count sufficiently in any rapid survey of the entire property.

As has been intimated, the formal garden is at the back of the house. Immediately below the porch is a grassed terrace. A broad, central path, crossed by another just before the inclosing wall, leads to a short flight of steps by which the lower and larger terrace is reached, on which is the formal garden proper. On the side next the house this garden terrace is inclosed within a wall which supports the upper terrace; on the other three sides it is inclosed within a granolithic balustrade, already taking on a fine discoloration suggestive of age. At the steps, at the corners, and at other points of emphasis are high piers surmounted with vases; smaller piers in the balustrade and walls carry boxes of plants.

Exactly in the center, and the focus of the whole garden, is a fountain of white marble, treasure trove from Italy, a work destined by an ancient noble family of Padua for the republic of Venice; it never reached its destination, but remained in Padua, and has at last found a permanent resting place in this beautiful American home. Two broad paths cross at the fountain, dividing the surrounding space into four grassed plots edged with flower borders beautifully selected and arranged. The planting of these grounds has been so chosen that there is a constant succession and change of bloom, once the season has set in, until fall. Hence it is always beautiful and always alive with flowers, and with interest.

Beyond the bounding balustrade the ground dips rapidly, so that the next terrace is considerably below the fountain terrace. In the center is a flight of steps, monumental in design and scale, dividing to the right and left, and returning below, where, underneath an archway, is a delicious wall fountain. The beautiful green sward here is set apart on one side as a tennis court and on the other as a bowling green. The outer borders on all sides are inclosed within a hemlock hedge; an arched opening on one side gives a beautiful view to a lake and the country beyond.

Then more steps to the lowest level of all. Just before one is a circular pool of water, retained within large stones, and just above it is a wonderful old beech tree, said to be the largest of its kind in the United States. Then, all at once, you find yourself in the forest, for the garden, on its outer borders, is inclosed within a thick wooded growth of true forest quality. Fine walks run through this beautiful woodland, in which wild flowers are encouraged to bloom their utmost, the paths marked, from time to time, with fine marble vases; at one corner a marble bird bath carefully emptied and cleaned each day; and so, through the woods, until the open ground is reached once more, passing the deer park the meanwhile, and thence through an alley of young trees back to the formal garden.

The treatment of the grounds on the entrance front of the house is very different. There is all openness, not bare

"Drumthwacket"—The Library

and barren, but thickly grassed, with fine old forest monarchs amply spaced, adding spaciousness of effect to the ground they shadow with their lofty branches. There are no ornamental touches here, for the great trees are so fine that no art could make them finer; but there is the quiet and the serenity of a shaded place in the country, than which there could be nothing more peaceful nor more delightful.

Of the remainder of the near-by grounds I need say but little. That the formal garden is inclosed has already been made clear; but the rigidity of its inclosure is, without, softened by clumps of shrubs and banks of bushes, some one or other of which is ever in bloom, according to its season, and the same treatment of hedges and masses of foliage is employed in a very able manner to lessen the differences between the house grounds and the more ample area of the farm.

"Drumthwacket"—The Sun Dial

The floral planting is thus gradually merged into the more utilitarian activities of the farm, which, owing to the size of the estate, are carried on in an extended manner. Broad fields of grass, corn and grain and a well-stocked market garden form the chief features of the land. The farm barn, a handsome structure designed by Mr. Gildersleeve, is placed at a distant point of the estate.

And all this is sacred land. On these broad fertile acres the battle of Princeton was fought out. Yonder is the cottage in which General Mercer died; beyond is the little old Quaker meeting house from which Washington directed his men; at the Red House, in another direction, Mrs. Moore had her leg shot off by a cannon ball.

One other building of interest remains to be noted. This is the house of Thomas Olden, which stands under the trees beyond the entrance front of " Drumthwacket " house. It is a quaint little old structure, and is believed to have been the house of the original settler on this site, William Olden, who came to Princeton in 1696, when he purchased the estate from William Penn. It is one of the oldest buildings in the vicinity, and is now an aviary for a fine collection of rare birds, maintained in beautiful order, and affords a strong contrast with the greater house near by. It is an excellent type of the houses built in this part of America in the early years of the eighteenth century.

"Drumthwacket"—The Upper Terrace

The Bungalow of A. A. Whitman, Esq.

Navesink Highlands, New Jersey

THE bungalow of A. A. Whitman, Esq., at Navesink Highlands, N. J., is very charmingly placed on a little plateau on the side of a hill, and among the trees which abound in the Highlands. From the piazza a broad view is obtained of the Shrewsbury River, Sandy Hook and the Atlantic Ocean.

The style of the house is a shingled gambrel country house of a rather picturesque type. The foundation is partly of brick piers, and the rest cedar and locust posts, the whole of which are covered in and are not exposed to view. The exterior of the house is covered entirely with shingles, both the walls and roof. The body of the house is stained a soft, woody green, while the roof is a silver gray. All the trimmings are painted white, including the sash. The blinds are painted a dark ivy green.

The first story contains a living-room, dining-room, kitchen and its dependencies, and the second story contains three bedrooms, two nurseries and two bathrooms.

The hall is a central one and has a staircase rising up to the second floor, in combination with the rear stairway. The studding and floor beams are exposed to view in the living-room and are stained a dull brown color. The walls have a dado of burlap, above which, between the studding, they are covered with a heavy building paper, the whole of which is stained with a harmonious effect. The fireplace is built of hard, well burned brick with a hearth of the same, and a facing rising high up under the mantelshelf. The small, latticed windows add much to the appearance of this room.

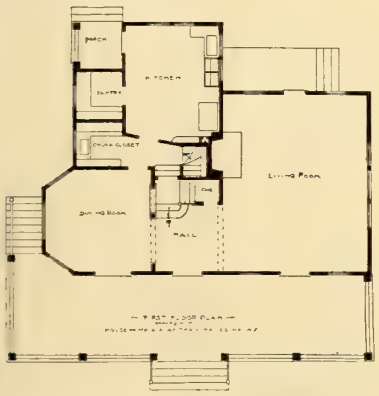
The dining-room is plastered and has a dado effect, with plate rack shelf at the top. The kitchen and service portion throughout is plastered, as are also all the sleeping-rooms and bathroom in the second and third stories. All the woodwork of the rooms is stained, excepting two of the bedrooms and bathroom, which are painted.

The third floor contains the servant quarters, trunk room, and a large playroom, so arranged that it can be made into two bedrooms whenever the occasion demands. The house throughout is provided with hard pine floors, electric bells and modern plumbing. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. The equipment throughout is of the best.

Mr. Ernest M. A. Machado, architect, No. 9 Cornhill Street, Boston, Mass.

A Meeting of Gables

The Living Room



The Porch Front

The Bungalow of A. A. Whitman, Esq., Navesink Highlands, New Jersey

"The Monastery," the House of Charles P. Searle, Esq.

Swampscott, Massachusetts

THE very unusual house of Mr. Charles P. Searle, at Philip Beach, Swampscott, Mass., attracts attention both by the novelty of its design and its very extraordinary situation; for much of the inner part of the house overhangs the sea in a quite literal sense, although the entrance front, embowered in large trees, hardly suggests such a situation. The grounds are inclosed with a stone wall, whose plainly cut arches and curved crest are repeated again in the forms of the entrance porch. Placed as it is on a rock, the design of the house has called for clever planning, with an adaptation to the various levels of the site and an economical utilization of the available area. The color scheme is quite unusual: the walls are gray, the roof brilliant red, the latticed windows pea green. The entrance porch is applied diagonally to the main structure, and faces a forecourt within the inclosing wall.

The principal door opens onto a vestibule in green and white, beyond which is the hall. This is a great, vaulted apartment two stories in height, finished in a very unusual and original manner. The walls are paneled to the springing of the vault arches and colored French gray; the upper walls are entirely filled with lattice work of pea green. There is a large mantel of gray stone, with a carved overmantel with

"The Monastery"—The Entrance Front

"The Monastery"—The Hall

festoons in relief above. At the further end are the stairs, partly inclosed within open woodwork. The walls of the upper landing are covered with palm leaf paper in green and white; the balustrade is painted green, and a green carpet is laid on the stairs.

At the head of the stairs is the morning-room, finished in the same way, with palm leaf paper and with green paint. It opens onto a large porch so close to the edge of the rock that the water is practically below it. The dining-room adjoins the morning-room and is finished in gray, with green wall decorations. The service rooms and kitchen adjoin the dining-room and are continued along the hall.

Another portion of the house opens to the right of the vestibule and hall. Here is a small stair-hall, with a private stair to the upper floor. Immediately adjoining it is Mr. Searle's room, which is finished in yellow. It has a tiled mantel and paneled seats. Beyond it, with a large doorway opening into the hall, is the music-room. The woodwork is painted gray and the walls are covered with pink and white paper. There is a white marble mantel, and the furniture is chiefly antique. Curtains of pink and white add to the very distinctive cheer and charm of this apartment.

It is easy to see and to understand the charm of this house, for charm it is in very agreeable and penetrating quantity. It is quaintly conceived, a striking, marked house of distinguished individuality, yet very well done. If there be oddity in the leading lines there is at least no eccentricity, no note of awkwardness, no effort at effect. On the contrary, there is a very natural development of good lines beautifully harmonized and very satisfactory in themselves.

This is the real secret of the success of the house. It is good, and goodness in a house sums up and includes about all the excellencies to domestic buildings that need to be considered by either the architect or the client.

The interest of this house centers chiefly in form and in line. Each of these important parts, considered separately and together, have been well studied. The situation also adds greatly to its charm. Perhaps any dwelling would be interesting here, any one well designed and well executed; but Mr. Searle has been fortunate in obtaining a house that adds to the interest of his site, adds to it in a thoroughly comprehensive and complete manner.

The Residence of Francis B. Rice, Esq.

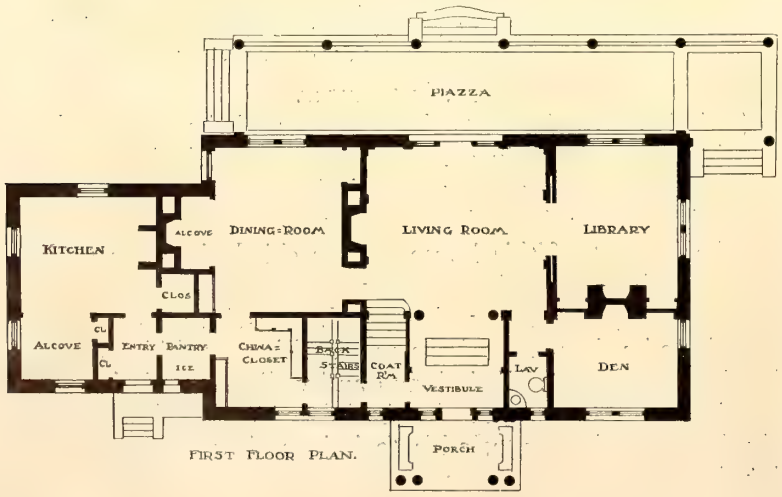
Westwood, Massachusetts

THE residence of Francis B. Rice, Esq., at Westwood, Mass., is designed in an attractive manner with Colonial detail. The small, lighted windows, with white painted wooden shutters, give a quaintness to the general effect. The building is constructed of red brick with white granite and Indiana limestone trimmings. The porches and main cornice are of wood. The roof is covered with shingles and is stained a dark green.

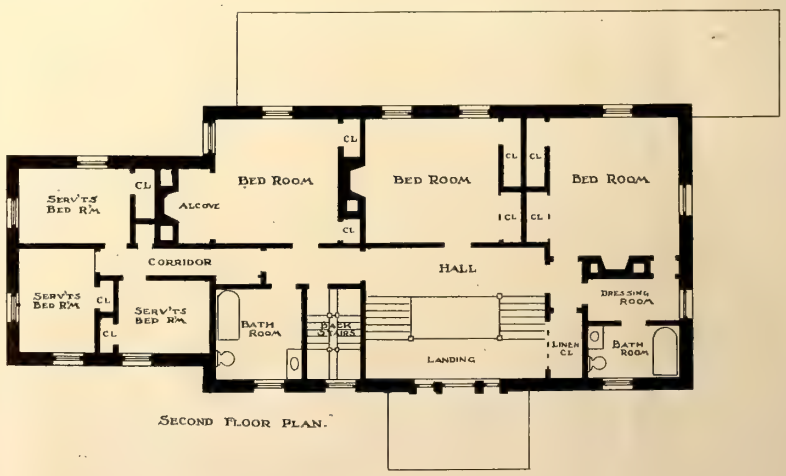
The entrance is into a vestibule from which a short flight of stairs rises up to the level of the living-room floor. This living-room is trimmed with wood, painted white, with mahogany doors. The walls have a low, paneled wainscoting. The staircase rises up at one side to a broad landing, from which another short flight of stairs rises up to the second story. The archway separating the stairs from the living-room is supported on Ionic columns; one of the columns forms the newel post from which the balustrade and mahogany rail spring. Ionic pilasters, corresponding with columns, are placed at stated intervals on the three other sides of the room, giving it a classic characteristic; the whole supports a massive wooden frieze. The fireplace is built with Roman brick and the facings and hearth are of the same, and a mantel of Colonial style with a paneled overmantel.

The den is treated in forest green, while the library is trimmed with white wood and is painted ivory-white, with

The Entrance Front



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

mahogany doors. Each has an open fireplace furnished with tiled facings and hearth, and mantels of Colonial style. The library has bookcases built in.

The dining-room is trimmed with mahogany and has a paneled wainscoting and a wooden cornice. The ingle-nook contains an open fireplace with Roman brick facings and hearth, and a mantel, and there are paneled seats at either side. The china closet is fitted up with bowl, dresser, cupboards, etc. The kitchen and its dependencies are fitted with all the best modern conveniences, and the servants' alcove forms a place off from the kitchen for the servants to rest, etc. Each are fitted up with closets, dressers, fireplace for range, etc. The second floor contains three master rooms and dressing-room, two bathrooms and a linen closet, besides three servant rooms. Each of the master rooms has an open fireplace, one of which is recessed into an alcove. The third floor contains two bedrooms and ample storage. The cellar contains the heating apparatus and fuel rooms, laundry, etc.

The Hall

Mr. James Purdon, architect, No. 8 Beacon Street, Boston, Mass.

Another View of the House

The Residence of Francis B. Rice, Esq., Westwood, Massachusetts

The Summer Home of Alfred J. Nathan, Esq.

Elberon, New Jersey

IT IS perfectly true that the building in this country of the summer home is much more elaborately and expensively done than it has ever been before, and it is also equally true that it is possible to obtain a very excellent result by the co-operation of a little common sense on the part of the owner and a little good taste on the part of a well trained architect, to build an attractive and serviceable house.

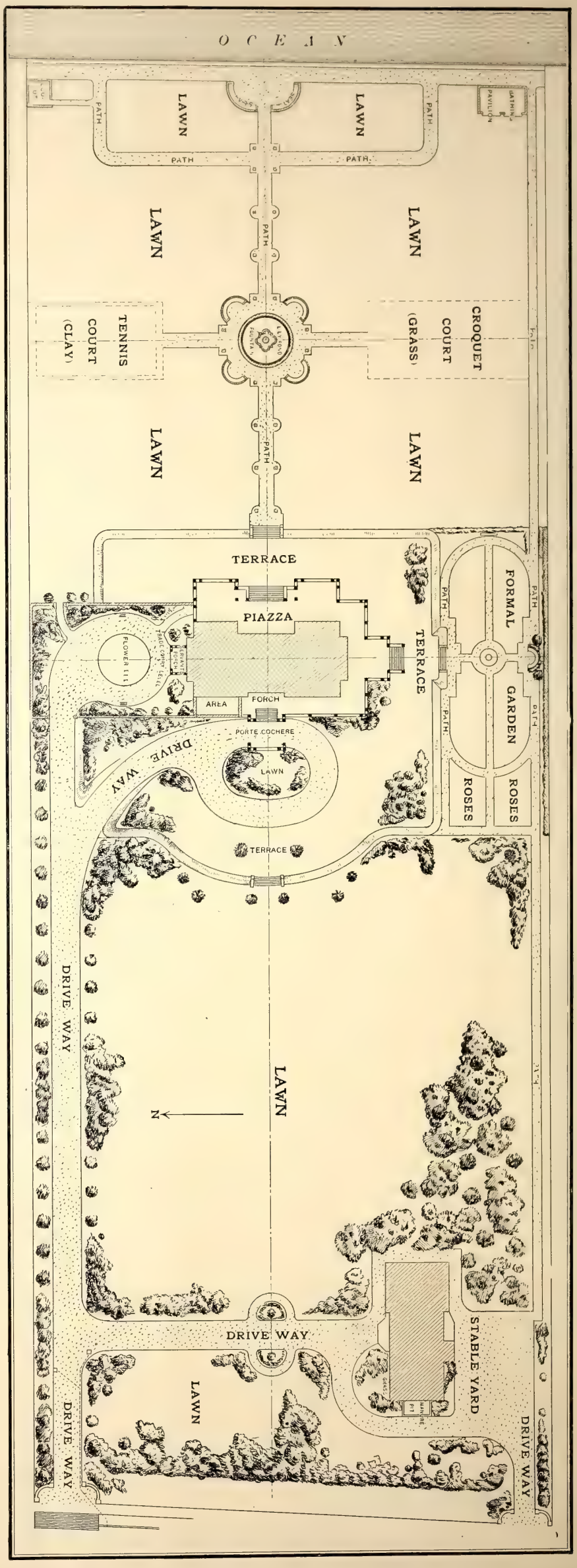
The house and garden belonging to Alfred J. Nathan, Esq., at Elberon, N. J., was built from plans prepared by Mr. A. J. Manning, who has exercised a great deal of care in the planning of the house and the laying out of the grounds which surround it and form its setting. The site is a long, unattractive sand flat extending from Ocean Avenue to the edge of the Atlantic Ocean, but by raising a terrace around the house and depressing the grade at the north end a very attractive effect has been made by relieving the monotony of the extensive level and entirely changing the topography from a flat piece of land to an uneven surface.

The grounds were laid out with a view to securing the greatest amount of lawn space, and in order to obtain this the stable and gate lodge were placed at the avenue end of the site, while the driveway was placed at the extreme northern boundary of the property, from which a sweeping road leads up to the porte-cochère at the front of the house. The main driveway continues through a gateway into this depressed inclosure with high brick walls, which form the service facilities for the house. The grade of this inclosure is on the level with the basement floor, in which the kitchen is placed.

At the front of the house is a small pool, circular in form, in the center of which is a graceful little figure of a Cupid embracing a dolphin, from whose mouth a jet of water plays into the air, and then splashes over the numerous water lilies floating upon the surface of the pool. Marble seats are placed at intervals around the pool.

To the south side of the house the sunken garden is placed, and is reached by marble steps. It is a large, rectangular area, and laid out with graveled walks, meeting in a central circle, in the middle of which is placed a handsomely carved sun-dial. At one side, opposite the stone steps, is a great stone semicircular seat of marble, with vases on either side. Other marble seats are placed at the end of the crosswalks. The planting of this garden and the estate in general are extensive and effective.

The house is constructed with red brick for the first story and stucco for the second story and gables, the whole being crowned with a Spanish tile roof of a brilliant tone of color, very much in keeping with the design, which is of the Spanish style of architecture. After passing through the vestibule, which is provided with a coat closet on one side and a toilet on the other, the main hall is reached. This hall, 30 x 40 feet, with the trim in the Spanish style, is



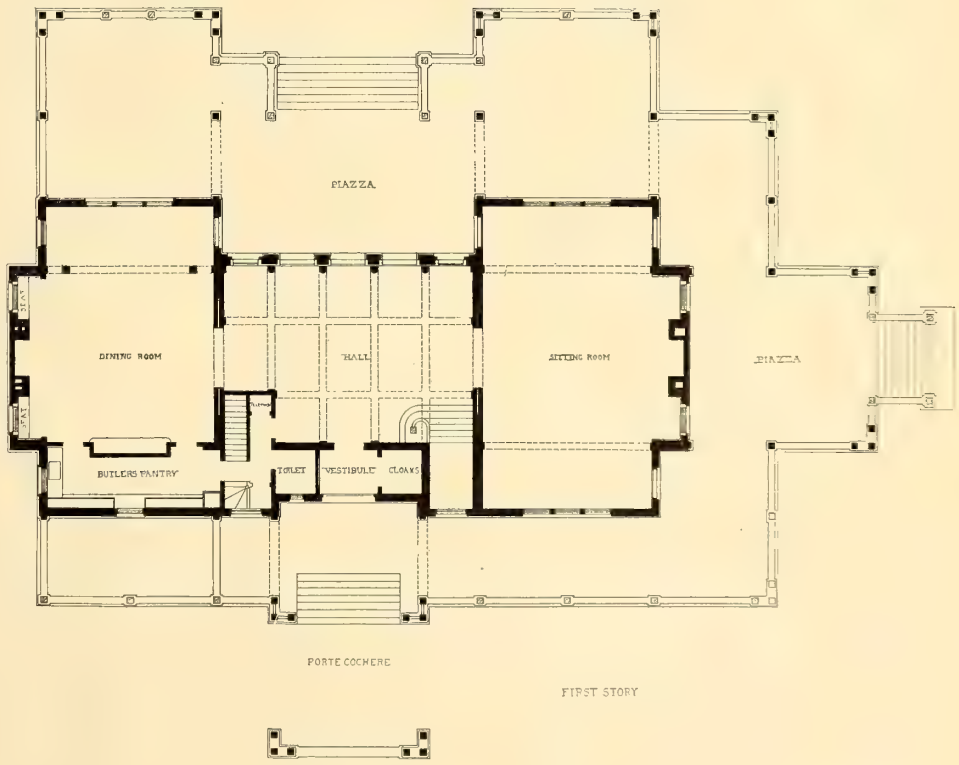
The House

treated with white enamel paint. The floor is covered with crimson velvet, blending well with the crimson wall scheme with harmonious effect. The staircase sweeps up to one side of the room with painted balustrade and mahogany rail, while at the opposite side the entire space is occupied with French windows opening on the piazza at the ocean side of the house. The walls have a paneled wainscoting, and the ceiling has massive beams supported on pilasters with carved capitals.

The drawing-room is 28 x 24 feet, and is treated in the French style; the walls have a paneled wainscoting, above which the space is covered with a green and white decoration; the whole is surmounted with a massive cornice. The woodwork is treated with white enamel paint. The fireplace, which forms the principal characteristic of the room, has a hearth and facings of pavanazzo marble, and a mantel which is carved in an elaborate manner.

The dining-room is trimmed with oak, treated in Flemish style. It has a paneled wainscoting and a wooden cornice, a buffet built in and a massive fireplace, and a mantel of Caen stone elaborately carved. On either side of the fireplace are nooks provided with paneled seats. The butler's pantry is fitted with all the best improvements, containing a dumb-waiter to the kitchen and its dependencies, which are placed in the basement.

The second floor contains five bedrooms fitted with large closets and four bathrooms, the trim of each is painted with white enamel, and each room is carried out in a particular color scheme in its wall decorations and furnishings. The bathrooms are furnished with tiled wainscotings and floor, and are supplied with porcelain fixtures and exposed nickelplated plumbing. A private stairway from the basement to the third floor forms access to the servants' quarters, which are placed on the third floor. The basement not only contains the kitchen and its dependencies, but a laundry, heating apparatus, fuel rooms, etc. The house was designed and built with a view to meeting all the necessary requirements for a well regulated summer home.

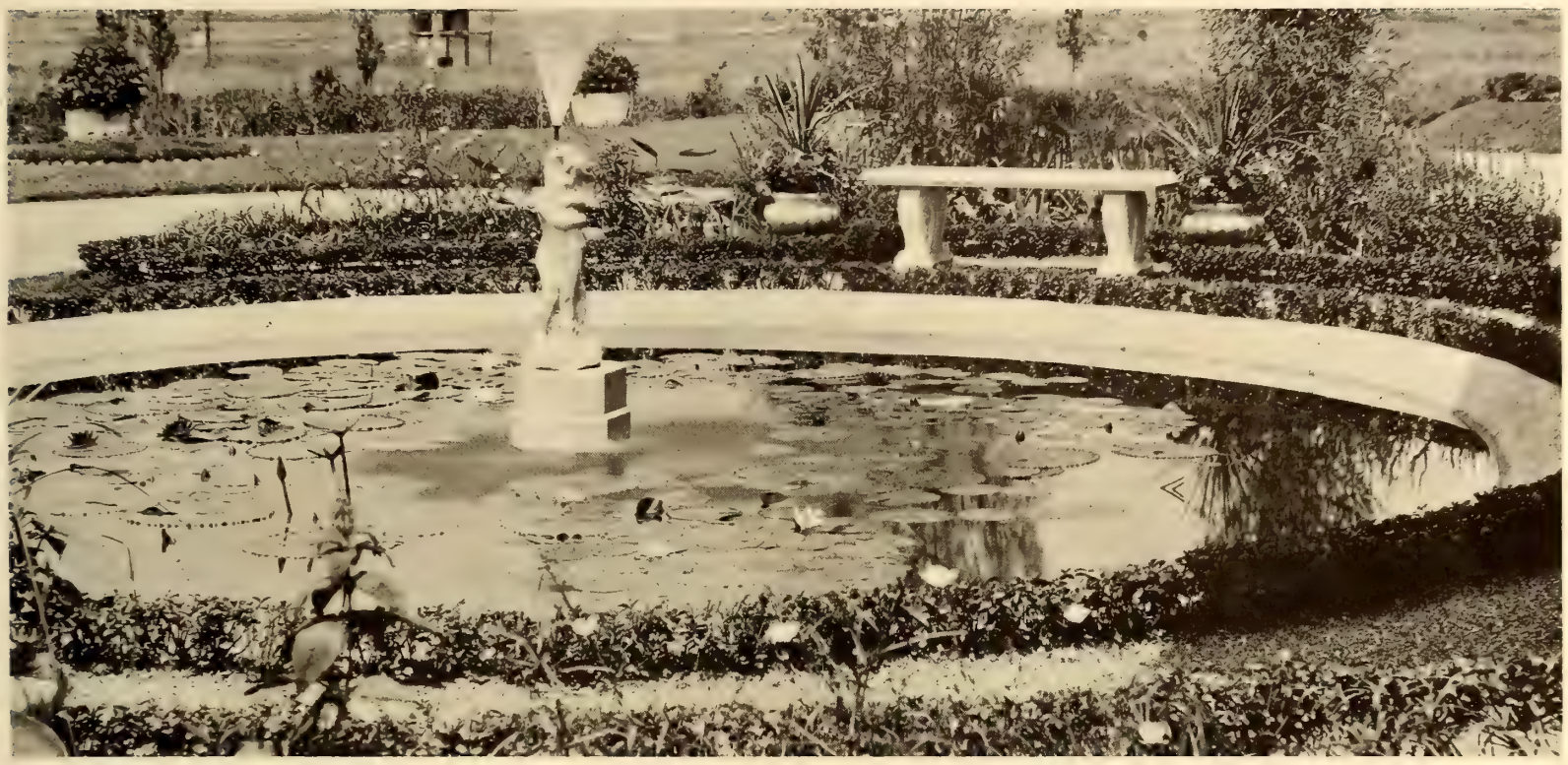


Mr. A. J. Manning, architect, No. 7 East 42d Street, New York.

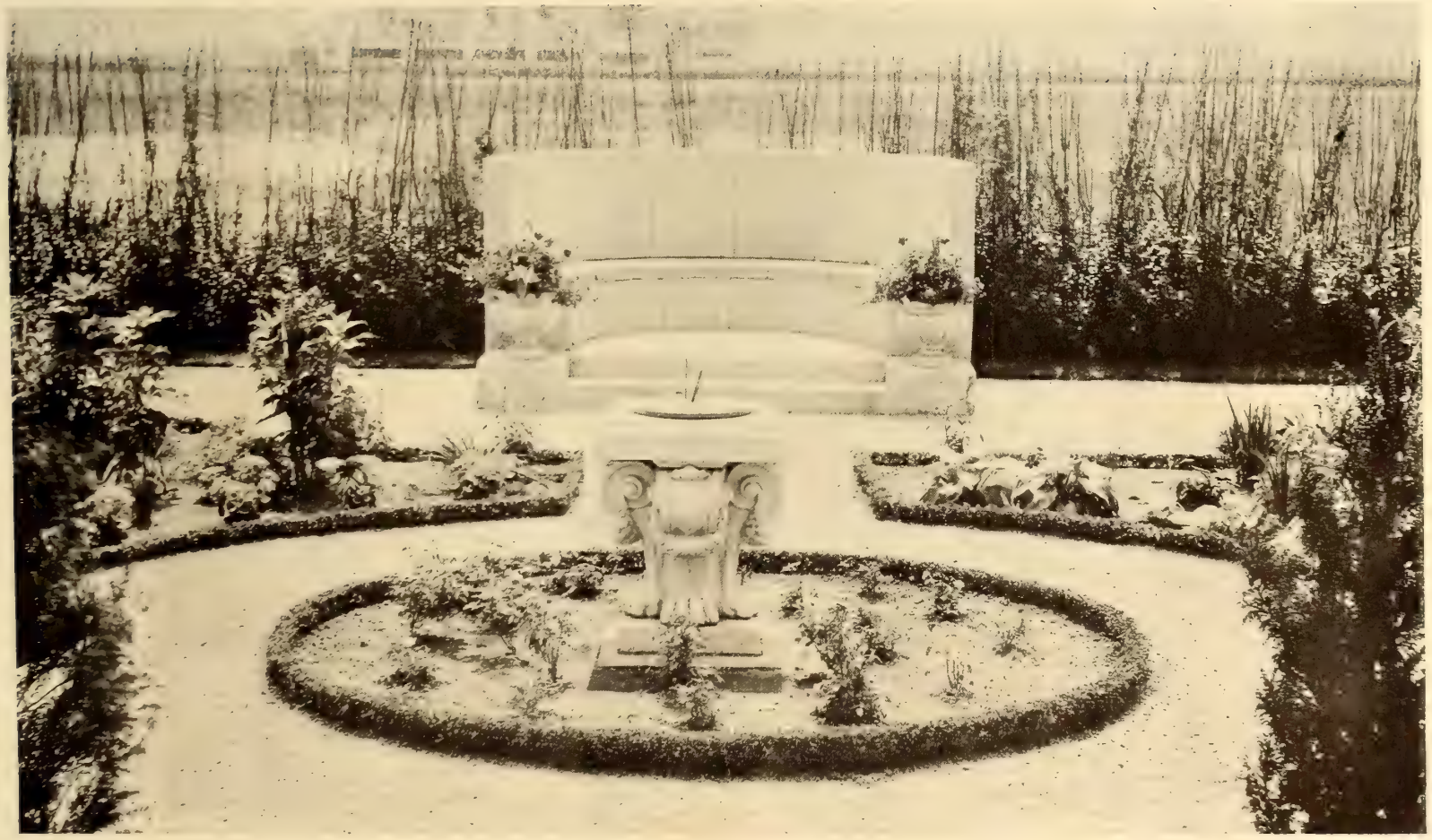
A Mantelpiece

A Marble Seat

The Summer Home of Alfred J. Nathan, Esq., Elberon, New Jersey



The Fountain



The Sun-Dial and Seat

The Summer Home of Alfred J. Nathan, Esq., Elberon, New Jersey

The Country Home of John R. Sherman, Esq.

Port Henry, New York

THE country home of John R. Sherman, Esq., is at Port Henry, N. Y. This field stone, shingle and half-timber house presents a very happy combination, and the color scheme and its whole environment give a harmonious effect.

The underpinning and the first story are built of field stone laid up at random, and in such a manner as to preserve the moss on the stones and not to show the mortar joints. The second story is of wood, and the exterior is covered with white cedar shingles, which are left to weather finish. The third story and gables are beamed. These beams are stained a soft brown color, while the stucco which is placed between the beams is of its natural silver-gray color. The roof is covered with shingles and is stained a brilliant red. All the trimmings are painted a soft brown color.

The entrance and living-halls are thrown into one apartment, and the whole is finished so as to present one large living-room. This living-hall is trimmed with pine and is treated with ivory-white enamel. It has a high paneled wainscoting, above which the walls are treated with crimson decoration. The ceiling is beamed. These beams are supported on columns and pilasters.

The fireplace has facings and a hearth of Pavonazetto marble, and a mantel of chaste design of the Colonial style, handsomely carved, and provided with an overmantel with a paneled center and columns on either side. The doors have one panel, and are of mahogany. The stairway is of handsome design, with painted balusters and mahogany rail. These stairs are recessed into a stair-hall. The main entrance is from the porte-cochère. The music-room is treated with ivory-white, and it has a wall covered with golden silk.

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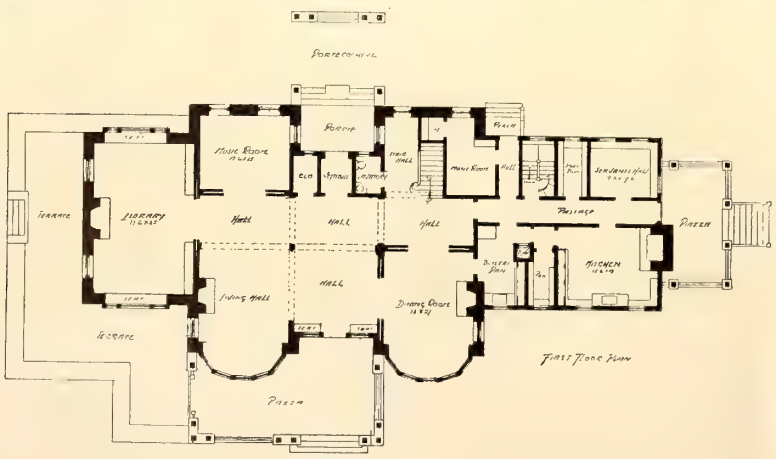

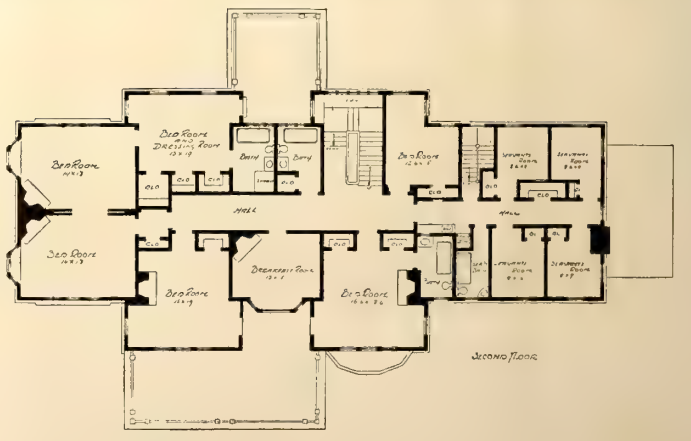

Mrs. Sherman's Boudoir

The Empire Dining-Room

The Country Home of John R. Sherman, Esq., Port Henry, New York

The Library

The Hall

The Country Home of John R. Sherman, Esq., Port Henry, New York

How to Lay Out a Wild Wood Garden

By Leila Mechlin

IN SPITE of the present enthusiasm for garden lore and the great variety of existing gardens, there are few persons who have heard of, or attempted the making of a garden in the woods. We have English gardens, Italian gardens, formal gardens and old-fashioned gardens galore, but very few wild gardens. The name itself has a paradoxical ring, since all gardens but the first have been made by man, and in large measure derived their charm by submission to his will. That it is not, however, an anomaly an ardent lover of the outdoor world has proved.

Some of the happiest results are brought about by untoward conditions, and so it happened that when five years ago Dr. Charles W. Richardson, of Washington, D. C., was confronted with the perplexing problem what to do with the loose lying stones on a recently purchased suburban estate, the solution of his difficulty, suggested by his wife, became the inception of a wild rock garden, unique in construction, delightful in character.

The location for such a garden was ideal. From the road the land rose with sufficient abruptness to give to the house crowning its eminence both privacy and a vista; at the summit it rolled itself out into a fairly broad plateau; dipped into a tiny dell, and finally lost itself in a well defined glade which wandered through the woods with a pleasant indifference of direction. The front slope has been ordered into a park; the top land utilized in part for a green, a formal flower garden and a kitchen garden; but beyond the dell, on the rear of the estate, occupying a bit of the plateau, and comprehending the glade and the gently sloping hillsides, over an acre and a half in all, is the rock garden.

The Japanese Point Where the Paths Divide

The Rhodendron Mound and the Day Lillies

The first step in the construction of this garden was the laying out of paths, and this was taken with thoughtful regard of a natural order. The stones, obstacles in the making of the park and green, were carried hence and dropped, first in a defining line, and then one on another to form pockets for the proper elevation of certain plants. Conventionality was scrupulously avoided, and the wilful, unsystematic spirit of the woods carefully preserved. Certain clearing of the underbrush and trees was of course necessary, but in the main nature's arrangement was adhered to. The paths are allowed to lead from place to place without apparent purpose; curving in and out, meeting and separating, affording vistas and forming secluded nooks; marked in places by a single row of rocks and passing in others through rocky, sloping walls, waist high. To overcome the inconvenience of abrupt slopes and gully washing steps have been constructed, at wide intervals, with long gravel treads and log lifts—picturesque, and at the same time informal. In the same spirit a rustic, Japanese covered seat has been erected at the parting of two walks to give the sojourner a sheltered rest, and here and there log benches have been disposed. An effort has been made, also, to produce variety in the several prospects. In one large section a wild lawn has been made a feature, and in another a group of beeches has been utilized to good effect.

Once planned and fairly started, the collection of plants began, and from every roadside and meadow in the vicinity of the District of Columbia Mrs. Richardson gathered specimens, transplanting wisely, and replacing as nearly as possible each one in its natural environment

A Portion of the Wild Lawn

Later on, as the plan and garden grew, both through friends and as the result of summer travel, contributions were brought in from outside, until now, passing through the garden, there will be found here and there, happily domesticated, a little stranger from some distant clime. These, in many instances, are peculiarly charming, serving as interesting mementos; but they are no whit more treasured than their native neighbors.

Mrs. Richardson has not restricted her collection to what are commonly known as wild flowers, but she has forbidden admission to all save hardy plants. The common garden annuals are given place elsewhere, and here only those sturdy enough to stand an outdoor winter are made welcome.

At first the flowers were planted in groups according to their blossoming periods—that is, in a spring bed, a summer bed and an autumn border—but almost directly it was discovered that this left sections of the garden barren for a large portion of the year and the order was abandoned for one of general mingling.

In the crevices of the rocks are placed bulbs, more than a thousand, and tiny plants habitually clinging or peculiarly suited to a stony soil; beyond these, on the crest, come the more vigorous plants, according to height, with lastly a row, or group, of bushes as a changing background.

Though of apparent careless construction, an effort has been made to bring into close relationship flowers harmonious in color, whose forms will also in some degree supplement each other. The tall, conventional iris is grown side by side with the graceful, drooping columbine; the wild geranium rises from a bed of ferns; the foxglove is brought in conjunction with the pink spirea. In some way the foxglove, which of recent years has renewed its popularity, seems peculiarly at home in the woods, loosing the stiffness that it so often affects in an ordinary garden, and fitting in with its wild environment with delightful grace. Possibly it needs the leafy background—possibly it rejoices in its release from captivity, its return to freedom. Certainly it assumes a new air and puts forth its best floral effort. No prettier sight is to be seen in this garden of the woods than a border of pink and white foxgloves, standing among the rocks by the side of a path, wisely nodding their heads in answer to the passing breeze.

But it is difficult to say which flower in such a garden is the most lovely, or to be the most highly prized, each, in its turn, excelling the last.

And what a quantity of them there are, and how closely they follow in each other's footsteps! Earliest in the spring, when the garden is seemingly only a wilderness of rocks and bare soil, peeping up among the rocks and around the tree trunks will be whole families of sober little Quaker ladies, or bluettes, as they are commonly called, with here and there a venturesome violet, a snowdrop or a timid anemone. Later, when the ferns are backing up out of the ground, for all the world like great brown hairpins, the tulips and jonquils will come, with the arbutus, the earliest spirea, the dogwood and the fruit blossoms. After these tramp the wild azalea, the laurel, the rhododendrons, the iris, the columbine, the wild geranium and the native honeysuckle. Meanwhile, the trees have been shaking out their mantles, the ground has been putting down its carpet, and the Japanese maple has been stretching out its red, dainty fingers to the sun. Then they come in a rush, fairly falling over each other in their haste for expression, regardless of the shortness of life, passing sometimes in a single day, when no human eye has noted either their entrance or their exit. Now come the native hydrangeas, the foxgloves, the roses, the lilies and the ferns. Then, by and by, we shall have the mallows, the brown-eyed susans, the tall, native spirea, the gaudy tiger lilies and many-colored asters, the goldenrod and the sumac. These familiar friends and many others come and go—here to-day, gone to-morrow—returning season after season as faithful playmates keeping a tryst. Thus the wild garden, even

The Entrance to the Garden, with its Ferns among the Rocks

more truly than the cultivated garden, is a summer calendar, recording by its flora the progress of the season; and, turning its pages one by one, the reader will find it the chronicle of an ever-changing story, imbued from start to finish with deepest interest.

It is, in a measure, this changeableness which makes a rock garden so alluring. The wild flowers show to a surprising degree a will of their own, and manifest in their short lifetimes an amazing amount of independence. Some, for example, do not appear at the scheduled time, lagging behind or rashly preceding their brethren. Others will not stay where they are placed, but year after year perversely replant themselves in awkward but more congenial positions. Away off among the ferns in June you may find, guiltily blooming, a truant sweet william, planted months before at the other end of the garden; or some early spring morning, when the frosts are still imminent, you may discover a venturesome little rose blossoming in the open. There is a chapter sometimes of accidents, but always of surprises.

A Rustic Summer House in a Shady Nook

But it must not be imagined that a rock garden resembles in any respect a flower garden, or is even primarily dependent upon its blossoms for its charm. Though Mrs. Richardson has in her garden several hundred varieties of flowering plants, there is never a time when the blossoms force the attention of the visitor. Even at the time of greatest abundance they reserve their beauty for those who seek them, and in this wise heighten their interest and intrinsic worth. There is, undoubtedly, something vastly impressive in a mass of blossoms—in a riot of floral color—but Nature rarely paints with a lavish palette, and when left to her own devices produces daintier, more moderate themes. One may find sensuous delight in a bed of gaudy poppies, of marigolds, of phlox; but when peeping under a bush you find a truss of red, wild strawberries, or, parting some twigs, you come unexpectedly upon a wind-blown brier rose, your joy will be of deeper root and partake of the ecstasy of a discoverer.

All the blossoms in the wild garden are not, it is true, hidden away. Many are frankly in evidence, and present from time to time brave fronts of color. But they are not separated from their environment, as in a house garden, and therefore, to a casual observer, become a part of their surroundings. Such a garden is, by turns, a gray or green or golden picture, in the composition of which the flowers play a small but definite part.

And in connection with the green picture it will be well to turn aside momentarily and observe the ferns. Of them Mrs. Richardson has made a specialty, getting together nine native varieties and massing them, individually and with flowers, to charming effect. Beneath one splendid white beech she has planted maidenhair, until the entire ground is carpeted with it as for a fairy revel. To these and to the iris she has given the glade, shading them on the open side with a privet hedge. High up on the hill, forming a central mound, she has planted her rhododendrons, and off to one side she has made a Japanese point, with stunted trees and shrubs brought from the land of the Mikado. It is constantly not only changing but growing. Year by year the garden receives new treasures and presents additional features. It has taken both care and time to order and direct its development; for, in spite of its name, it has needed much attention. It is not easy to keep wild things within bounds: the strong must be prevented from overpowering the weak, and newcomers proving desirable must be succored against those which come unbidden and manifest themselves to be unworthy companions. Mrs. Richardson has done much of this work as well as the planning herself, but it has been done gradually, and for every effort expended the garden has returned her fourfold. It has proved a perennial pleasure, a restful retreat and a charming botanical treasure house. It is unique but not distorted; large but not lavish; a work of combined skill and patience which, given the same physical conditions, might be readily duplicated; but above and beyond all these it is a beautiful adaptation of nature. This, after all, is the finest success to achieve with a garden, and to it must be added the great novelty this garden possesses.

The Country Home of John R. Sherman, Esq.

Concluded from page 240

The library is trimmed with oak, treated with a Flemish brown. This room is an attractive apartment, with windows at either end fitted with paneled seats, and an open fireplace furnished with facings of Caen stone, with a carved keystone showing a crest. The walls are paneled from the floor to the ceiling, and the latter is beamed, forming deep panels. There are bookcases built in. The mantel is handsomely carved with a paneled and carved overmantel, and it forms the important characteristic of the entire room.

The dining-room is trimmed with red mahogany. It has a paneled wainscoting, above which the walls are covered with green silk. The ceiling is beamed, forming deep panels; the spaces between the beams being finished with a gold treatment. The open fireplace has marble facings and hearth and a paneled mantel and overmantel; both are ornamented with brass in the Empire style.

The second floor is planned with five bedrooms, boudoir, breakfast-room, three bathrooms, besides four servant bedrooms and bath, which are placed over the extension. This floor is treated with white enamel, and the doors are one panel and are of mahogany. The boudoir has walls covered with blue silk, with curtains to match. The walls are paneled; some of the panels are filled in with plate-glass mirrors. The fireplace has a facing and hearth of Pavonazetto marble, and a mantel with overmantel paneled and with the spaces filled in with mirrors.

Mr. Henry C. Pelton, architect, 1133 Broadway, New York.

The Furniture of Our Forefathers

By Francis Durando Nichols

THE love for old furniture is not generally an acquired taste, and one is scarcely conscious of the time when the beauty of the antiques was first introduced into one's mind. How well we remember the feeling of excitement with which we beheld the tall, stately, grandfather's clock on the staircase, the Sheraton sofa which added dignity to the Colonial hall, the old bookcase in grandpa's library, and the grand old four-poster in grandma's room, whose presence seemed to breathe a delightful essence of repose and peace. Then there was the old hob grate where the apples were roasted and the corn was popped, and the old card table which was drawn up for a quiet little game after dinner. All these we remember; and how many similar treasure houses of the antique there are, especially in New England, and yet how little is known of them.

The love for old pieces of furniture has grown as the years have passed, and one can not enjoy or appreciate them to the full until he has learned something of their history, which, in the many interests it arouses, will more than repay him for his trouble. Perhaps one reason why this hobby has become so popular is that specimens of the antiques are so numerous that we do not have to seek far to find some genuine examples. The wonder is that so few of the possessors of antique furniture know, or care to learn, anything about either its history, maker or origin.

The illustrations which are presented on these pages were made from photographs especially taken for the purpose of showing some of the exceptionally fine examples of old furniture found in the old Colonial houses in Salem, Mass., which is one of the oldest colonies in New England, and is rich in antiquities.

Fig. 1—A Console Table of the Adam Style, and at One Time Used in "Cleopatra's Barge"

The Sheraton design of furniture building must have come into vogue about 1773, for Thomas Sheraton, who was a native of Stockton-on-Tees, supported himself about the year 1791 as an author; for he published at that time a work in two volumes, "The Cabinet Maker and Upholsterer's Drawing Book," by which it would seem that he did not make furniture after 1793, and that before that time he had filled orders like any other ordinary workman.

The console table, Fig. 1, is a fine example, and is the property of Mrs. William Waters. It is characteristic of the Adam style, for it has been aptly said that the characteristics of the Adam design are simplicity, elegance, slenderness and the bas-relief. The ornamental brass trimmings, including the fluted shell at the corners, the griffin design in the center, the caryatides at the top of the column, and the claw feet at the bottom, are all characteristic of Adam. It is interesting to note that this

Fig. 2—A Sheraton Sofa

Fig. 3—A Sofa Built in 1790

Fig. 4—A Pineapple Card Table of the Empire Style, Showing Antique Candlesticks, with Tray and Snuffers

console table was made for one of the governors of the West Indian Islands, and in its transportation was captured by a privateer, and was afterward used as a part of the furniture of " Cleopatra's Barge " when in port.

The secretary, or bookcase, Fig. 8, and sometimes called a " bureau-bookcase," was made in 1770, and is the property of Mrs. Nathan Mansfield. It is in a fine state of preservation, and it has a shell pattern carved into the flap, while the top is surmounted with the design of the burning torch, one in the center and one at either side—a design which was quite frequently used in Colonial times.

The pineapple card table, Fig. 4, so called from being carved in the design of the pineapple, is of the Empire style, and belongs to Mrs. Charles J. Sadler. It was formerly the property of the family of General Oliver, who owned it for one hundred years. It is of mahogany, and the central post is beautifully carved in the design of the pineapple, from the base of which swing out, from either of the four corners, graceful, sweeping legs, which are also handsomely carved. The top, as is shown in the picture, is folded, but it can be made double the size by unfolding the leaf. The antique candlesticks, with tray and snuffers, shown on the top of the table, are worthy of note.

The mahogany card table, Fig. 5, has four straight legs, and in order to increase the size of the top a leaf is lifted up from the bottom and a leg pulled out to give it support. There is some good carving at the corners and on the legs.

Fig. 5—A Mahogany Card Table

Fig. 6—A Colonial Mantel, Showing the First Hob Grate Introduced into Salem

The graceful Sheraton sofa was designed and built for the purpose of using it for a place to rest and loll upon after dinner. The sofa, Fig. 3, was built in 1790, and belongs to Mrs. Nathan Osgood, while the other sofa, Fig. 2, is the property of Mrs. Henry P. Benson; both of which are fine examples of that period.

The Colonial mantel, Fig. 6, which is exquisite in its design, is in the house of Mr. Charles R. Waters, and the fireplace contains the first hob grate introduced into Salem. The mantel is a beauty, with its central panel showing a carved eagle, while at either side is the floral festoon and bow-knot, beyond which is the pilaster, showing an urn carved therein.

The four-poster bedstead, Fig. 7, was built in 1795, and and is owned by Mr. Charles R. Waters. It is one of the

Fig. 7—Four-Poster Bedstead, with Carved Tester
Built in 1795

finest examples in this country. Its four posts are handsomely carved with garlands of flowers; they support a tester, which is also elaborately carved and decorated in gilt.

Our forefathers liked to take their leisure, and the easy lounge and luxurious bed are ever in evidence. The importance (I had almost said the dignity) of the bed, during the period of which I am treating, can hardly be overestimated. The bed is sometimes mentioned apart from the bedstead, but frequently the term is used to include the bedstead and all its furnishings It must be remembered that in Europe the bedchamber was a room of great importance, for kings and queens often received their courtiers in their sleeping apartments. The heavy, imposing four-poster was both luxurious and beautiful. The framework, as in the illustration presented, was usually handsomely carved, the bed was of the softest down, the linen of the finest, and the outer cover of a cloth of gold, or of some other costly material, richly embroidered with heraldic designs.

One instinctively wonders, in viewing any collection of old furniture, whether the original possessor took the same pleasure in it and had the same pride of it that every living owner feels. They must have, one can but think, for these fine old pieces have real intrinsic merit and interest of a very penetrating and absorbing sort. To have owned them must have been a delight, for such it is now; to have lived with them must have been a joy, for this is the sensation they give to-day.

Yet the modern mind can hardly place itself in the same position as that of the contemporary of these pieces. We enjoy them as we think the original owners must have enjoyed them, but to us they have an additional quality, which is inseparable from old objects of interest. Their very age endears them to us, and this is a source of enjoyment from them that the original owners could not have had.

But we must believe their interest was always great and very real. Their books and letters are strewn with affectionate records of their furniture, testifying to a lively appreciation of it. They knew good things when they saw them, did these old folk, and they had the rare advantage of having good articles when they purchased the handiwork of the furniture makers of the end of the eighteenth century. Not all of it, of course, was good; many of the old models are miracles of discomfort, and put the strict constructionist to shame for pure vagary of style; but there was honest intent to please in much of this work, and if the search for novelty of form and pattern led the designer astray, the modern eye is apt to forgive him because his work belongs to a past time, every item of which has present day interest.

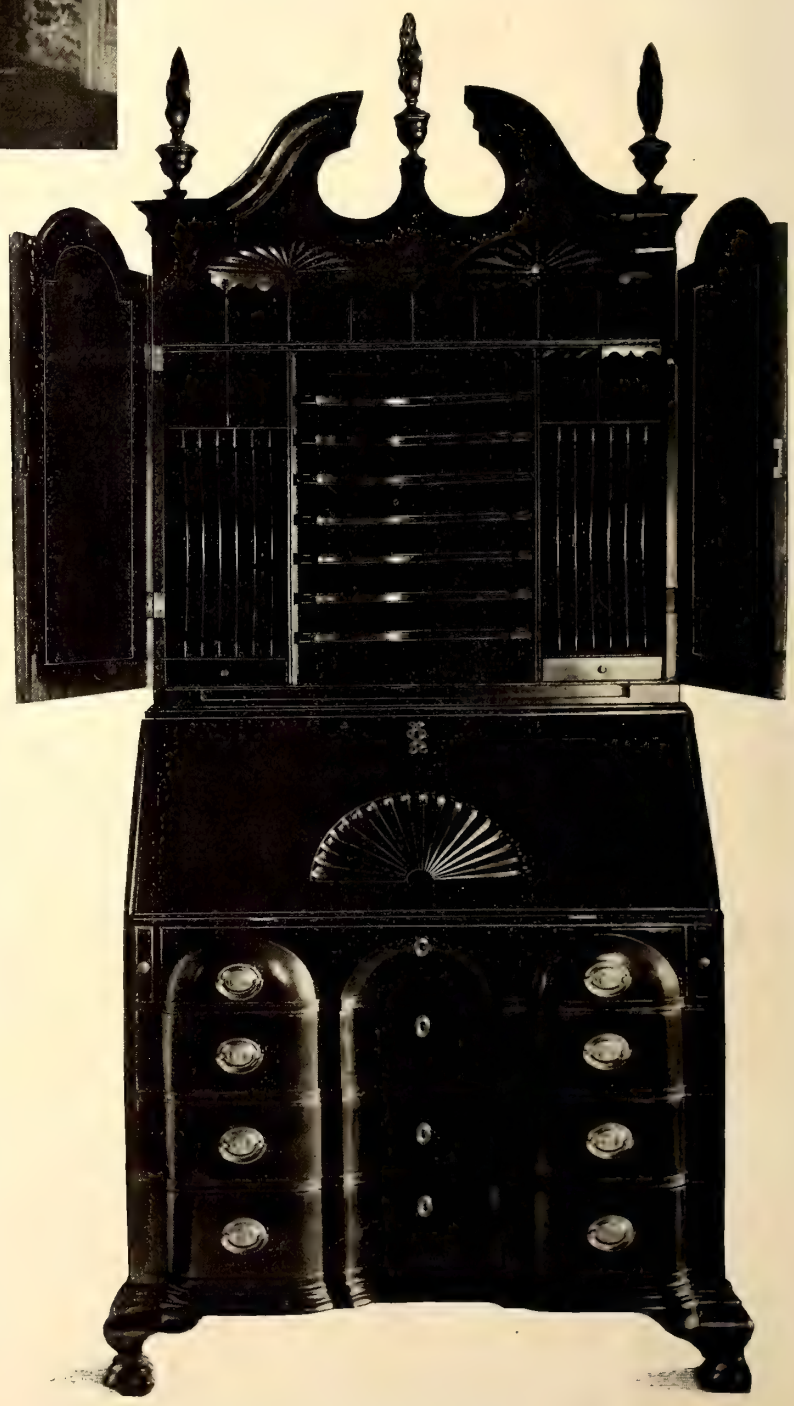

Fig. 8—A Secretary, Sometimes Called a Bureau-Bookcase
Built in 1770

A Southern California Ranch

By Charles F. Holder

THAT there is a subtle charm about ranch life no one who has passed through the strip of country between the desert and the deep sea on the southern California coast can deny, but what it is is another question. What the Eastern man calls a farm the Californian designates a ranch, and by the same token the farmer is a rancher. Here the resemblance ends, as the conditions which environ the two are entirely different. The typical big California rancher is in every sense the possessor of an eminent domain. He owns and controls a principality, and on some of the old ranches one could ride for days and find new and diverting scenery.

A few years ago, comparatively speaking, all California was divided into these principalities, but to-day, owing to the increased value of the land and the high taxes, they are being cut up. Towns and villages are plotted on them, and what were once farms now become town sites. Many of the great ranches still remain more or less intact, and one of the largest in southern California, and possibly the most attractive, is the Santa Anita Rancho, in Los Angeles County, about fourteen miles from Los Angeles, on the slope of the Sierra Madre Range, destined in the near future to become one of the most delightful of the many suburbs of Los Angeles, whose limits are now within about two miles of the borders of that city. It is said that the ambition of E. J. Baldwin, the owner of Santa Anita, was to own a strip of land several miles wide, and from the Sierra Madre to the sea—a distance of thirty miles.

The Ranch Home across the Lake, Showing Diversity of Plants and Trees, the Vegetation Being Principally Tropical

That he nearly succeeded is well known, and doubtless, it would have been an accomplished fact had land not leaped into high values so rapidly. As it stands, this estate is represented by a number of splendid ranches that sweep down from the mountains, crossing the Puente, or Mission Hills, to the Pacific, whose blue waters can be distinctly seen shimmering in the sun.

Santa Anita Rancho proper, cut and trimmed by towns and small encroachments, represents fifteen thousand acres, in the heart of the San Gabriel Valley. Four railroads—the Atchison, Topeka and Santa Fé, the Southern Pacific, Salt Lake and an electric line from Los Angeles—now cross it, and the days of Santa Anita are doubtless numbered, its doom being to be cut up into acres and dotted with the splendid homes of retired captains of industry who have already secured large tracts of it.

The Cypress and Pine Road Leading to the House

The beauty of Santa Anita lies in its commanding position and in the fact that its upper portion, where it leaves the Sierra Madre, is a beautiful live oak grove, made up of trees centuries old, of large size and extent, which not only enhance the attractiveness of the land, but suggest to the Californian a water store more valuable here than gold or silver. The initial part of the rancho is Santa Anita Cañon, a deep glen in the mountains whose waters run down through the ranch. At an altitude of about eighteen hundred feet the great oaks begin—a natural park, level and gently sloping. In the center of this the owner has made his home on what is virtually an island in a lake, which lends beauty to the environment of the whole. From a long distance the tall palms which

The Ranch Home from the North, Showing the Gardens About the House

surround the ranch house can be seen rising, plume-like, gigantic pompons of green, nearly one hundred feet in air, from a forest of rare tropical and semitropical trees.

The approach from the south is through a splendid line of eucalyptus or blue gums, which tower aloft, giving the observer an impressive conception of the majesty of forest trees which in Australia attain a height of several hundred feet. Here we are upon the " home ranch " of fifteen hundred acres, all in a high state of cultivation. Reaching away from the eucalyptus drive, either side, are groves of various kinds of orange—from the late Valencia to the Washington navel—masses of deep green dotted with discs of gold, lemon orchards in the distance, lime, kumquat and grapefruit, and a long list of citrus fruits, making up one of the largest and most productive citrus groves in the State.

vistas of palms through screens of cypress, Lombardy poplars and pines; indeed, the strange gathering of trees from nearly every clime about this ranch house is not the least of its attractions.

The ranch house is the central point from which radiate many different interests. In one direction the eye rests upon vast orange groves, their perennial green sprinkled with seeming dust of gold. In another are hundreds of acres of vineyard, where the Mission grape grows in low bunches, California fashion, and converts the gray soil into a coat of green. Toward Pasadena is the live oak grove, and to the north a splendid domain of hundreds of acres of this lowland forest. Another vista includes the winery, to which, in September and October, tons of grapes are taken and pressed, the juice of Zinfandel, Tokay, Mission and

The Garden Around the Lake—The Home of a California Rancher

The ranch house itself is a modest villa standing amid groups of palms, fan and date, which with eucalyptus, pepper, willow and others form grateful shade. The borders of the garden at the lake edge are planted with gorgeous cannas, ferns and brakes, of vigorous and beautiful growth, and strange plants and trees appear at every hand. About the lake or moat, which appears to nearly surround the ranch house, like the moat of a feudal castle, the drive winds, affording attractive and charming vistas. From one point of vantage the great groups of palms and eucalyptus are seen wholly reflected in the water, while from another graceful willows drooping to the water, giant rose bushes and trees covered with masses of white Banksian roses appear, merely suggestive of the wealth of bloom to be found here. Other drives in the immediate vicinity of the house show

many more being stored in huge tuns, and year after year bottled and cased for shipment all over the world.

A visit to this winery is a revelation to those not familiar with the varied products of a southern California ranch. Hundreds of Mexicans and Chinamen are employed here, making wine, trimming vines, picking grapes, oranges, lemons, limes and other fruits in season, and cultivating the land at other times. This ranch is a community in itself. Within its corporate limits is the town of Arcadia, made up, in the main, of those engaged in and about the ranch and devoted to its interests. In the ranch yard, near the winery, is the ranch store, a type of the general store found throughout the West. Near here are the blacksmith and other shops containing complete outfits for repairs.

The Santa Anita wine, oranges, lemons and grapes are

famous, but the feature of this ranch that possibly has attracted the most attention is its stock, its horses, as here have been bred some of the fastest horses in the world, whose sires and dams are familiar in the world of sport, and where large and extensive stables are filled with famous horses that are daily exercised over the great track near the ranch house, and from which racers and winners have gone out all over the country for many years.

At Santa Anita the entire story of the farmer in southern California is exemplified, as almost every factor that appeals to the farmer is here, with all the esthetic features that are produced by luxuriant foliage and splendid forests, mesas and mountains. Here is demonstrated the benefits of irrigation that has reclaimed all southern California. Water is piped down from the mountain streams of the Santa Anita Cañon, that leads up into the Sierra Madre, and introduced to the various groves of citrus fruits here, running in long parallel lines or filling great squares about the roots of trees.

There is a succession of crops on this ranch, due to the complete elimination of winter. The winter crops are the citrus fruits. They have been growing during the summer under the care of the irrigator, and by Christmas are being picked, the groves filled with Chinamen and Mexicans, who, with canvas bags and clippers, go from tree to tree, pick the fruit, or rather cut it, and send it to the packing house, where it is washed, scoured, graded, wrapped in tissue and packed. The grading is done by the washers, who, after cleaning the fruit, place it on an incline, each orange passing into the tube of its own size and so on into a large box, the grading being mechanical and perfect. From here the fruit goes to the packers, and is then ready for shipping in the specially devised cars of the three transcontinental lines that cross the ranch. By early spring the oranges are all picked. The gangs of Chinamen have cut down the acres of grapevines, which now resemble rows of black stumps, down through which the cultivators are driven to keep out the weeds, while fleet greyhounds are used to kill the jack rabbits. In early spring the vineyards leave out, and in a short time the walnut grove is a mass of green, and the almond and pomegranate and various fruit trees of the East—peach, prune, apricot, plum, pear and many more—the men, the farmers or ranchers passing from the care of one crop to the other.

The climate is so mild that many of the vegetables grow all winter, and in sheltered places the strawberry. In May the loquat is ripe and the crop of guavas has been gathered. In July apricots and peaches are ready for market. The hay crop, which was planted before Christmas, depending upon the first rain, was cut in April or May, and all over the ranch great piles of barley and oat hay tell an interesting story. The winter on this ranch would seem like a cool summer to an Eastern farmer. There is no laying up of wood for winter. A frost sufficient to kill tomatoes, or heliotrope if protected by the eaves, is rare, and winter glides imperceptibly into summer. The mountains, rising to an altitude of six thousand feet back of the ranch, are green, but the poppy fields, the acres of flowers that mark the winter, are gone, and the land in the open is gray, and tall columns of dust can be seen rising down the valley. The summer days are dry, not sultry, and there is no rain from May until November. The ranch is watered by means of irrigation. The soil is given just what it needs, no more. Rains in summer are detrimental; the grapes do not require it, and it would ruin the dried fruit industry. Tons of fruit are shipped, much of it dried. The heat is not as disagreeable as that in any city of the East. Sunstroke is unknown, thunderstorms rare. I doubt if any portion of this entire ranch of fifteen thousand acres has been struck by lightning in many years. There are few if any high winds. Tornadoes and cyclones are unknown; indeed, as far as disagreeable features are concerned, farming in the San Gabriel Valley, California, has none of them when compared to other regions.

As summer merges into autumn the grapes ripen and the vintage is on. Indians appear from somewhere, and great squads of men of various nationalities enter the vineyards and cut the grapes, which are taken to the press. Then there are olives and a variety of fruits which are mere incidents of this great farm, which in some way produces nearly every flower, fruit or vegetable that grows anywhere. Bananas are seen side by side with apples, the pomegranate and the palm. Little wonder that the farmer of the East is coming to California. The prospect is an inviting one—an open winter and no snow nor frost. The doom of the great California ranches lies in the coming of the Eastern farmer. The large ranches are being cut and divided, sold by ten and fifty acres, and the San Gabriel Valley and southern California will in time be one vast series of farms on which are raised the products of the civilized world.

This will cause many important changes in California life and California scenery. The human aspects of California are of engrossing interest in their distinct individuality and in their complete difference with the characteristics of the East. The farmer with Eastern ideas and methods must translate them into the characteristics of California before he can win success in the great fertile land on the Pacific coast. This is the first lesson to be learned by every settler, and it must be learned quickly, or only failure follows. The adjustment of the Eastern farmer to California conditions will doubtless follow quickly enough, but an extended immigration from the East must greatly change the face of things in the far West.

The Eucalyptus Drive and the Approach to the Ranch Home

Principles of Home Decoration

III—Dining-Rooms—Good and Bad

By Joy Wheeler Dow

1—The Architect's Bad Advice Led the Well-Intentioned Owner Astray

2—A Dining-Hall That Might Look Well in Berlin or Munich

HIS dining-room is the touchstone of a man's refinement. I do not mean its decoration alone, but the intimate philosophy which the architecture and decoration together express. And yet a man may belie his philosophy, too, by a sufficient amount of cunning and trickery in art matters. For instance, a really bad man morally can produce a very creditable dining-room if Satan helps him, but he is usually actuated by the sentiment of the following cynical lines, I know not from what source:

"The eyes of other people are the eyes that ruin us. If all but myself were blind, I should never want a fine house nor fine furniture."

And it is thus in certain details of his environment do we come across the vanity of it.

Now, it is not the eyes of other people at all, but a certain

3—A Dining-Room with Much that is Praiseworthy

amiable quality of temperament that governs successful home decoration generally, the dining-room in particular. To those that have not this temperament it may seem incredible that a dining-room could ever mean so much to a man that, in default of servants, he would enjoy going to the trouble of preparing his own supper in the kitchen — likewise presumably an ideal one—serving it in the dining-room, arranging the table mats and doilies, his single cover, and lighting the cadelabras just the same as for company, then to sit down all alone, with the kind of pathetic grace that Mr. Mansfield assumes in the last act of "Beau Brummel"—the attic at Caen—where he bows across the table impressively and soliloquizes:

"I thought—I thought I saw the prince there."

4—Good Dining-Room Furniture in a Poor Architectural Setting

Yet that man has natural refinement in contradistinction to the superficial gloss society requires of every one, as there will be those who must confess to themselves that a supper from an overturned packing box or while standing before a quick lunch counter would be equally as enjoyable if there was enough and it was palatable. It will be seen why the pretentious dining-room is left to the decorator, or, if one has not the means to do this, he is contented with about the style of dining-room we have illustrated in Fig. 1. This will be recognized as the typical dining-room of mediocre city apartments and suburban houses, and I regret to say there are more of this kind of dining-room than any other, a really good dining-room (see Fig. 9) being the rarest exception. The influence of cultivated women should help matters only, way down deep, few women like housework. They often pretend to like it, because it might seem unwomanly to confess otherwise, as it would seem unmanly for a man to confess he loathed work and preferred idleness to industry; but, secretly, attractive as Fig. 9 is—I can fancy I hear a woman exclaiming, "That window is positively dear!"—they would not care to own it unless they had maids to keep it up. And as for setting a table for herself alone, to say nothing about the candelabras and the other graceful accessories, why there is scarcely one woman in a thousand that would ever dream of doing such a thing. They would sit upon the kitchen table or anywhere and munch a sandwich, drink a glass of milk, and say it was all theatrics in the men. But the thousandth woman knows it is not theatrics, but the secret of all true art, the expressed wish in one's home surroundings to make the world a better place than it really is and a more charitable place than the Lord intended.

5—The Dining-Room of Stanford White, Esq.

Strangely enough there is nobody who cares less about an artistic dining-room than the artistic woman, that is, of course, if she has to take care of it, prepare meals, even her own meals; and should you mention housework to the artistic woman

6—A State Dining-Room

when she is engaged in the much higher pursuit of discussing "over soul" or "under soul," it would be enough to bring on a fit of demoniacal fury. There may be pursuits more edifying and useful to man than the ethics of the dining-room, but I know of none more conducive to his welfare; and considering it is one of the first instincts of creation I do not think it would be wise to neglect it entirely. For my own part, it has always seemed to me an evil to be retained rather than the means to an end, and I have always thought of those people whose wealth and servants, like "Elizabeth of the German garden," for instance, created a desire to camp out, that they should arrange to camp out indefinitely, and allow the money thus saved to buy as many comfortable, not to say ideal, dining-rooms for those who can appreciate what the Lord seems not willing we should all enjoy.

These are the principles of the artistic dining-room ethically expressed. Everybody wants to express this philosophy without knowing it, perhaps without believing it—that it is the keynote of a dining-room design; even in dining-rooms which are distinctly banal and tawdry, we recognize what the owners wished to express very well (see Fig. 1), only they had bad advice about it, and didn't say it. What they did say architecturally was really the opposite to what was intended—artificiality, stuffiness, tawdriness, lack of harmony, nouveaux riches, etc. Compare, if you will, Fig. 1 with Fig. 9, and I think further comment upon Fig. 1 by me will be superfluous.

Then, anything that departs from the Anglo-Saxon dining-room is not to be recommended in America. Teakwood screens, bisons' heads, French window drapery and a certain heavy kind of Flemish wood carving are all inimical to the successful dining-room, albeit the bison is a distinctly American product. He goes better in the hall (see Fig. 2), barring the Adirondacks cabin chimney-piece, which is out with everything else in the room. This dining-room might look extremely well in Berlin or Munich, but not, we shall say, in New England—too much chance for moths and microbes; besides, we want to open the windows and breathe some air—some American air, which has more vitality in a cubic inch than they have in Europe in a cubic foot. The atmosphere all over Europe is what they would call in England "relaxing"—dead and very unsalubrious for the average American, who is used to our atomized champagne; at least, that is what Charles Dickens said it was like. (Read his description of sailing into

7—An English Painted Dining-Room

Massachusetts Bay in "American Notes.")

It is, therefore, with some grateful sense one turns to the out-and-out American dining-room exemplified in Fig. 3. Of course Fig. 9 is our choice, by long odds; but one may tell when these dining-rooms are clean, which is more than can be said of Fig. 8. Even the artistic woman will clean when she won't cook, though she likes it no better. The big drop light over the table looks a bit terrifying, but it may not be so in operation; and I have seen much prettier door heads. Beauty has no formulæ, nor is the word "simplicity" a safe word by itself for the decoration of a home, because there are so many people who can not distinguish between good simplicity and that which is bad—in fact, positively ugly. Great artists, architects and musicians are often unable to distinguish between inspiration and mediocrity in their own work, hence all the disappointing productions of otherwise great talent. They can not tell the difference so easy to us who receive the impressions. We marvel, but it is a fact.

8—The Hopeless Average Dining-Room

Now, the dining-room we present in Fig. 4 is an extremely simple one, but not a pretty one, like we have in Fig. 9. It is too like a cell in its proportions: the window sills are either unduly elevated or else unduly depressed, while the room is devoid of what we call, in architecture, "features." There is neither chimney nor fireplace visible in the picture, although there may be one, in which case the photographer is to blame. There is no cornice, no chair rail, no wainscot—in a word, no especial character but simplicity; and thus we see that simplicity has a meaningless side which is worthless for art purposes. We see good dining-room furniture in a poor architectural setting.

The dining-room shown in Fig. 5 is a much better design, for it has wainscot and cornice and breadth, all unalienable to the successful Colonial dining-room. Then the long window is charming, the mirror and wall painting all right, and but for a few blemishes might rival No. 9. That heterogeneous collection of plates and placques is very disturbing to the quiet and peace which otherwise reign.

Be as original as you please in plotting your dining-room, but the originality must be confined within the iron-bound limits of historical precedent, and I have explained why in an earlier paper. Don't go in for freaks, although the freaks be, in a way, artistic successes. (See the remarkable painted dining-room from English Country Life, Fig. 7). This is very clever and well carried out, but it is not a dining-room.

9—The Gem of the Collection

Upon the other hand, don't make your dining-room so strictly a dining-room as to appear a solecism were one to sit in it at other than meal times. That is the "underdone" way of it. Have a little of the living-room atmosphere—some silent invitation, I will call it, to linger after the cloth has been removed—such a very comfortable, all around apartment, indeed, that one might wish to tarry at any time with book or even writing materials.

Of course, if we were speaking of state dining-rooms (from English Country Life, Fig. 6), why that is something else, again; but these principles of home decoration are for Americans of average means.

Helps to Home Building

The House Garden

THE garden is the great external beautifier of the house. It is created for beauty alone and for no other purpose. The house has its utilitarian value. It is built for shelter, for comfort, for pleasure, for everything, in short, but its external form and artistic aspect; these are qualities deliberately given to it by its designer and are quite distinct and apart from its functional purpose as a place of shelter.

But the garden is sheer joy. It has nothing to do but to grow and be beautiful. It is a place of pure enjoyment, arranged for the giving of pleasure, and without suggestion of utilitarian purpose. That it adds to the beauty of a place is, of course, a great good fortune, but even this is a beauty-giving quality without hint of utility.

No other part of the home is so completely divorced from questions of use. The house is built because it has a useful purpose to fulfill. It is furnished because the furniture is necessary and has useful functions to perform. It is difficult to add anything, even of the most ornamental quality, to the house without giving some thought to its utility. But the garden is free for beauty-making. It needs only to be beautiful to fulfill the utmost utility, and this is done so gracefully and so naturally that the mere idea of utility is utterly foreign to it.

There are gardens and gardens. Many very well disposed persons have no eyes for gardens save those designated as Italian. And the garden lover does not live who will decry the beauty of these elaborate places, decked with a sumptuous adornment of architecture and sculpture, planted with costly plants, arranged in a formal and beautiful manner. A very high type of garden is this, rich in every possible resource of beauty, unquestionably the most beautiful garden type we have.

Quite a variety of reasons make the Italian garden beautiful, and have, unquestionably, greatly furthered its vogue in America. It is complete in itself and has been planned as a unit from the first stone and the first plant. It is inclosed within boundary lines which add enormously to its completeness of effect, and help most materially in giving that unity of result which is one of its chief charms. It has, moreover, the distinction given it by an architectural framework, which may be literally a bounding wall, a partial inclosure, or separate structures which close in certain vistas or otherwise have definite structural purposes to perform. In whatever form architecture is introduced, it is a happy, joyous art of no great structural value, architecture for adornment only, and pleasing because of its adorning qualities. The planting, also, is carried out on a prearranged scale, in which every shrub and tree, every plant and flower, look toward the realization of a settled end—an end of beauty, and of the most beauty. And when in the midst of this loveliness an exquisite fountain, a rare vase or a beautiful statue is set up, the crown has been given to the work of art, and the fortunate owner may rest satisfied that the utmost has been done for the adornment of his home.

Not every one may have an Italian garden, but most owners may have a garden of some sort; must have, in fact, unless his house is stood in a row and solemnly bounded on either side by other houses as completely wanting in the great beautifier of nature as his own. Even the Italian garden can be quite a simple affair, for while it is always aided by architectural and sculptural additions neither of these great arts is actually essential to its making.

An Italian garden is a formal garden, but a garden may be planted in a formal way, without architectural and sculptural adjuncts which are so generally considered as essentially a part of the Italian type. A formal garden is, of course, exactly what its name implies—a garden planted in a formal way, with paths somewhat rigid in plan, with set borders and definite planning in all its planting. Like the Italian garden it presupposes a generous space for its development, and is hardly suited to plots of restricted dimensions.

The hardy garden is another interesting type of garden, which has the supreme advantage of reproducing itself, season after season, with added growth and beauty each year. If it be considered as a type itself it is only in its contents, for it may be planted in a formal way, and it actually constitutes the larger part of the planting of the Italian garden; or, to refer to another class, it may be planted in a wild and natural manner, without thought of formal arrangement, and left to grow as Nature herself may determine.

Nor should the tree garden be neglected. This, once more, is a garden that belongs to the large estate, for trees require room for growth, and although their beauty may be as great alone as in the mass. Every great public park is a tree garden on a large scale, in which trees of many varieties are grown under the happiest conditions, and give to the people the fulness of their beauty. The great private estate is also, in a sense, a tree garden, in which each tree is carefully tended, and viewed, as it should be, as a natural treasure beyond price.

And then, the simple little flower garden, never too small to be without beauty, never too slight in idea to be wanting in grace, never too unimportant to be without dignity and merit. The flower garden is the beginning of all gardens, for it is the easiest made and the most lovingly tended. It is the individual garden, the garden of the home, the personal pastime of the owner. And its beauty is quite as measureless as the more sumptuous garden of the large landowner. Size, indeed, has nothing to do with garden values, only beauty.

Wherever there is a bit of land around a house it should be put to garden uses: it is there for that purpose and for no other. It is possibly true that land exists that houses may be built upon it, but the time is not yet ripe for this preponderance of architecture upon the earth, and the day when it may come is so far off that present-living souls need not be deterred from the cultivation of their garden spots by the hideous suggestion. The land is ours, and those who are fortunate enough to possess any of it have no nobler duty to themselves and to their neighbors than to install, cultivate and develop the best garden their means and their tastes will permit.

This touches immediately on a distinct value of gardens apart from their inherent quality as beautifiers of the house. A beautiful garden is seen of all men. A beautiful house interior is the personal private property of the owner, existing for his own delight alone and for that of his selectest friends. It is a selfish enjoyment, that of the interior of the house, albeit a most natural one. But the garden is as fully enjoyed by the public as by the owner. It is the owner's contribution to public art, his gift to the aspect of his street or road, his personal addition to the value of his own real estate. This is sordid ground on which to defend the merits of the garden, but it is a very real and definite ground that need not be overlooked.

Science for the Home

Humidity Within the House

THERE is a most mistaken notion that humidity is a source of discomfort and annoyance. That much suffering is caused in summer by an excess of humidity is unquestionably true; but the relationship between temperature and humidity is far from being understood, and particularly the part humidity takes in the heating economy of the house in the winter.

That the average American house is too highly heated in winter will be admitted without qualification; it is a characteristic of almost every American interior where coal can be had for consumption. It is, of course, necessary to keep warm in our cold and trying winters, and the commonplace way of doing so is to burn up as much coal as possible.

Scientific study of the heating problem has, however, demonstrated that the best way to heat a house, the safest way in which to keep warm, is to burn coal in a scientific way, using it properly, getting the most out of it, and conducting the performance with the aid of scientific apparatus contrived to secure the best results.

Some very curious effects have been noted from the study of heating conditions. Rooms in which the temperature is higher than that of other rooms on other days feel colder to the occupants than when the room thermometer reads less. Investigation has brought out the remarkable fact that there is a direct relationship between the effect of temperature and the moisture in the air. In other words, given two rooms of equal temperature, the one with the greater humidity will feel the warmer; or, put it another way, the room which has the greater humidity will require less temperature, as recorded by the thermometer, than the one which is drier. The obvious conclusion from such observations is that a proper relationship must be maintained between the humidity and the temperature of our houses. Dr. Henry Mitchell Smith, who has given much time to the investigation of this subject, suggests about 60 per cent., never less than 50 per cent. nor more than 70. With such a percentage of humidity a temperature of 65 degrees F. is found amply sufficient and comfortable.

Two results follow from a proper adjustment of the relationship between temperature and humidity. There is greater personal comfort and less danger from disease, because with this adjustment comes a more healthful atmosphere. The humidity within the house bears a more scientific relationship to that without, a condition quite essential to good health in winter.

The second result is the economy in the consumption of fuel. This is a matter that directly affects every producer of heat, and is a topic to the importance of which every householder is keenly alive. It means, moreover, obtaining better results, with less cost; that is to say, quite sufficient temperature and more sanitary living conditions.

The relationship of humidity to temperature within the house is, therefore, a subject of great practical importance. Hydrometers and moistening apparatus, of a good kind, properly applied and the latter well regulated, are thus very essential to the scientific equipment of the house, and have a real and practical value quite apart from their scientific interest. Even if their use is not now general, the time is not far distant when they will be used more than at present.

Heating the House

OCTOBER is the month when the thoughts of the housekeeper are irresistibly impelled toward the subject of heating the house. There is no choice in the matter; it is a subject that presents itself with unfailing regularity. It is a topic of the first importance, and a vast industry has grown up around it, while much thought and care have been devoted to it, all with the laudible purpose of providing the best way of obtaining the most heat at the lowest cost.

Heating conditions vary so much with the localities that no one general set of rules can be laid down which would even so much as govern one place. The heating problem is quite as individual as the furnishing problem; what will seem best for one house may not answer for another, although the experiences gained by one householder will often furnish profitable subjects for discussion and examination by others.

Notwithstanding that very elaborate apparatus can now be had for heating the house, the old-fashioned stove and the still more old-fashioned open grate are still with us and still have their value and utility. It is not always possible to heat a house, and especially a country house, with a furnace, and the stove in many different forms holds its own against the claims of other devices calculated to produce better results with greater efficiency. The open fireplace is, of course, wasteful in heat, and hence wasteful in fuel; but it likewise has its utility and its charm is very great.

There are many more modern forms of heating apparatus: the furnace for hot air; the combination of hot water and hot air; hot water and steam, the latter being applied both in low pressure and in high pressure. This brief summary, however, by no means exhausts the list, nor does it indicate the very varied combinations and devices which are supplied under these general heads. Of furnaces, for example, there are three general kinds, portable, fixed and twin, the latter being a doubled form of fixed furnace. To these should be added fan furnaces, large heating apparatus supplied with fans and suited to the heating of churches, schools and other large buildings.

In the hot water and hot air combination system the hot gases are made to pass over a water heating surface suspended over the fire, a device that effects some saving in fuel, but which hinders ventilation, since in direct radiation the same air is used over and over again in any room. Steam heating combinations are also sometimes combined with the furnace, an arrangement that it is claimed has quick heating ability and requires the use of smaller radiators; it is, however, very sensitive to the condition of the fire.

The final great group of heating apparatus includes those for heating with hot water and steam. This comprises a vast variety of systems and apparatus, many of which have special claims for consideration. It is with one form or another of such apparatus that the larger number of buildings and dwellings are now heated where the intention is to provide the most approved appliances, the kinds that give the best results and with the utmost economy of combustion. Individual conditions, in most cases, will determine which system to use and which apparatus is best suited for individual needs. It is impossible to advise specifically, except in actual cases and with full knowledge of all the facts.

The Household

Furniture for Men

ON the face of it there would appear to be no especial reason why furniture for men should differ in any essential way from furniture for women or from furniture used by both sexes. Sex in furniture is, in truth, a new idea. Furniture for children we all know, since it must be of smaller size than that suited to the grown-ups, and, in addition, includes some special articles, such as desks and play furniture, which are only available for childhood. With the exception of the shaving stand, and that weird thing called the cellarette, the whole range of furniture would seem to offer little enough which might be termed essentially masculine.

A furniture dealer has, however, gotten together a list of furniture for men, and the catalogue is an interesting one, as indicating exactly what a specialist in furniture regards as especially men's furniture. The shaving stand naturally heads the list, but it is hard pressed with the chafing dish cabinet and the cellarette. Then come lounging chairs, club chairs and all sorts of comfortable seats, which, we may be sure, the women will value as highly as any man, but which have a very high place in any scheme devised for masculine comfort. Settles, lounges, davenports and couches come next, and as being closely related to the comfort-giving qualities of lounging chairs. Bachelor chiffoniers, auto valets and wardrobes, together with bachelor dressers, form another notable group which have masculine significance, and which are more or less directly designed for men and intended for them.

As for beds, no man arranging living quarters could well get along without one, and they are necessarily included in the category, as are floor coverings of all sorts—rugs, carpets and mats. As for tables, there is absolutely no limit, from the exclusively masculine card table to the dining or breakfast table and tables for every possible use. If the bachelor—for men's furniture seems to be rather specially intended for this unfortunate class of human beings—keeps house and has a dining-room, he will need a host of things—buffets, sideboards, dinner gongs, serving trays, wine coolers, muffin stands; doubtless there are other articles which come in the same list, but this is sufficient indication that the man housekeeper must equip himself with articles of furniture many of which he never before knew the use of, much less appreciated the necessity for.

For his bedroom he will need, beside the articles already named, costumers and clothes trees, cedar chests and clothes presses. For his hall and for other rooms he will require clocks, lamps, electroliers, desk lights and reading lamps, all of infinite shape and size, and all requiring more or less constant care. For his library he will need bookcases, revolving bookcases, book shelves, cabinets, book blocks, tables, desks and chairs. A screen may be needed before the fireplace, or to hide the litter of papers which almost every one accumulates.

Of minor articles there will be a host of things, such as pedestals and desk sets, foot stool and shoe boxes, wood boxes and fireplace sets, and perhaps a padded fireplace foot rail, while the humidor, cigar boxes and smoking sets will be the very first things thought of. Obviously a very pretty man's apartment could be furnished from such a list, an apartment thoroughly masculine in effect, even though many of the articles would be equally available for women.

Cheap Baths

THERE are two impediments to the general use of baths in houses of low cost—the recognition of their value and the cost of installation. The value of a bath in a private house is so very obvious that no argument for its utility would be needed were it not for the astounding observations made on the use of baths by investigation into tenement house conditions in New York and elsewhere. These inquiries have demonstrated that a regular system of education in the use of baths is urgently needed among the foreign-born population of the United States, and until the manifest prejudice against baths and their proper use by such peoples is overcome a recognition of their value will be delayed.

The question of cost is another important matter, since the installation of the most moderate bathroom in a city house is a matter of considerable expense. Municipal laws and regulations govern this subject in all cities, and these can not be departed from; but the installation of a bath in buildings erected outside city limits, or even in an old house within municipal limits in which no provision for such necessities was originally made, can sometimes be accomplished in a comparatively inexpensive manner.

Several devices to this end have been proposed from time to time. A bath sunk in the kitchen floor, or, if the building contains a pantry, in that space, has been suggested; but its disadvantages are so obvious that the proposal needs hardly to be made to be rejected. Unless the usual elaborate plumbing fittings are used it is apparent that the bath must be near the water supply or directly under it, and that proper provision be made for getting rid of the water. If there is no escape pipe, and the water must be baled out, almost any sort of a bath will be objectionable; in any event, such a bath must be immediately adjoining a waste outlet.

Another suggestion is that the bath be placed so that water, both hot and cold, be brought into it immediately from the sources of supply, the regular pipe for the cold water and the heater for the hot, while the end may be placed under the sink. The water supply is thus easily obtained, and the sink is close at hand for baling out the water after the bath has been used. This method is not open to the objection of placing the bath in the floor, where it must be immediately covered lest some other person step into it, where it is difficult to empty it, and where it is quite impossible to get below it. A bath stood on the floor is at least accessible.

Still another suggestion is a swinging bath, that folds up and may be incased within a wardrobe-like inclosure or cabinet. This brings the bath directly into the room, where it may be reached on all sides, and hence it is very available for sick-rooms and other places where it may be desirable to approach the bath from more than one side. It saves space and practically takes the bath out of the room when not in use.

For limited quarters the spray bath is often found the most available. It involves only a spray circlet, a cistern for a moderate amount of water, and a waterproof sheet as an inclosure. In houses of very moderate cost it must necessarily be a cold water bath only, as an expensive installation is needed for hot water. All of these methods are makeshifts, and are only available for houses of the lowest cost.

Civic Betterment

The Business Aspect

FEW forms of artistic endeavor offer such definite financial returns as that phase of public art which is termed civic betterment. All art has a commercial aspect, since it can not thrive unless it is supported, and it will not, in a general way, be supported unless those who put their money into it derive a personal satisfaction of ownership, and very possibly, and quite rightly, look to a reimbursement for their expenditure, if not for an actual profit. The records of modern art sales at home and abroad demonstrate very clearly that good art of every kind is a safe and profitable form of investment, a result true alike of sculpture and painting, engraving and etching, metal-work and enamel, pottery and porcelain, and so on through the whole gamut of artistic endeavor.

The collecting of objects of art can not, however, be legitimately undertaken for commercial gains alone. The true end of art is to give pleasure and delight, and the person who views it wholly as a financial speculation derives no personal satisfaction from it of any kind. Moreover, such gains are personal private gains of no public importance. But civic betterment stands in a wholly different class. Civic art is public art; it is seen and appreciated by every one. Its ownership by a community means collective ownership by the whole people; it is art which is not intended to delight a few, but to appeal to the many. These are self-evident facts that require no elaboration.

The commercial aspect of such art is, therefore, very great, and its value as a commercial investment has been shown over and over again. This result is much more broadly admitted in continental Europe than it is in America. A good deal of effort toward civic betterment has been put forth in America in the last few years, but it has not yet reached a point at which we can feel any great satisfaction in it. Much of this work has been done on too small a scale to yield appreciable results, and most of it, except in the way of parks, has been planned and executed in a haphazard manner that makes but slight impression.

It is futile to forecast the future, but the possibility of transforming any American city into a great work of art such as Paris is, and such as Berlin, Vienna and Budapest are in part, seems slight enough. Washington, indeed, we have, and it is more than likely that the capital of this country will, in the years to come, be developed into one of the handsomest and most charming of cities. Even London, with its long-time adherence to monotony, has felt the force of general improvement, and very costly works in that direction have been under way for several years past.

This means that the commercial aspect of public art has received substantial recognition. Of the attractions of Paris there is scarce a limit, but over and above its manifold pleasures is the fitness of the setting, the beautiful streets, the fine parks, the many statues and fountains, the splendid buildings, public and private. All these form a part of the materials of civic betterment, illustrated and exemplified in Paris in the finest modern way. The French unquestionably take a keen personal delight in all this splendor. Paris is Paris to them not only because it is the capital of their country, but because it is so fine and beautiful. And they will tell you, quite calmly, that all this wealth of public art brings many tourists to their country, each laden with a bag of treasure which it is the patriotic duty of every Frenchman to deplete. It is a superb example of the commercial value of civic betterment.

The International Congress of Public Art

THERE is no surer indication of popular success in Europe than the holding of a "Congress." Some of these gatherings, which are exclusively concerned with a single general topic, have been holding yearly sessions for a half century or more. Just as soon as any subject develops sufficient interest, seems, in fact, to have "arrived," it becomes the topic of an annual gathering, sometimes of the citizens of one country, sometimes of the citizens of several, in which case it assumes the importance of an international undertaking. A local congress on public art would, therefore, be a very sure indication of local interest; an international congress would be eloquent testimony to broader interest; and the permanency of the movement, the reality of the effort, would be indicated very surely by the frequency with which such gatherings were held.

The holding of an international exhibition at Liége during the present summer offered a fitting place for the holding of the Third International Congress of Public Art, which was held in that city between September 15 and 21, under the patronage of the Belgian government. The honorary presidents were chiefly cabinet ministers, and while styled international, the officers and speakers were chiefly citizens of Belgium.

The congress was divided into five sections for conveniences of discussion, comprising schools, academies and schools of industrial arts, museums and expositions; the theater; dramatic and lyric art, and aspects and administration of public property. A very long list of papers was read, and the discussions were participated in by a number of speakers.

The organization of this congress was arranged in the admirable manner that long experience has given the French in such affairs. The officers of the general and local government were early interested in the affair; large local and general committees were organized, almost every one within reach being approached and their interest secured; an attractive programme of topics, quite general in its plan, was drawn up and widely circulated, and general participation in the debates solicited; a set fee, moderate in amount, was fixed for participation in the congress, and a printed copy of the proceedings was offered to members at a reduced price. In addition there was the distinction that comes from association with such a gathering and the opportunity it afforded for meeting many men of eminence.

All of these things appeal very strongly to the European of artistic, literary, scientific interests, and such gatherings are always well attended because the railroad and hotel charges on the continent are cheap and the distances to be traveled are comparatively small. Every country of Europe has also many citizens which are interested in just such gatherings as the recent one at Liége. Such affairs are, therefore, not only better managed abroad than in America, but the conditions necessary to success are much more abundant.

The meeting at Liége was notable for the large number of public officials that took part in it.

The Garden

The Garden Month by Month—October

OCTOBER is at once the season for closing up and finishing the garden work in the open for the year, and the time of preparation for the spring. One rarely has need to dismantle a garden; nature does that quickly enough, and all too soon; but there is much to do in clearing up, and October is a busy month for putting things away, for cleaning up the garden—a task that needs to be performed almost daily in the quick fall of leaves—and in a general way getting matters in condition for the winter.

The dahlia, the canna and the caladium will come to an end with the first frosts quite certain to arrive early in the month. The roots should be preserved and kept in proper condition through the winter for planting again next spring. When their tops have died and dried off, dig up the roots, taking some earth with them, which should not be removed, and spread them on a board in the sun, covering them at night with blankets or pieces of carpet. If the weather permits the sun exposure should be repeated for several days. The tops should not be cut off until the second day, and about six inches of stalk should always be left. The cellar, if not cold or damp, is an excellent place in which to keep these roots. It is not advisable to store them in sand unless it is perfectly dry. Gladiolus roots should also be ripened in the sun and put away for the winter. The stalks should not be removed until they are ready for final storing.

There is a lot of miscellaneous work to be done in the garden besides getting the roots put away for next spring. A supply of pot soil should always be carried over the winter. Occasions for its use are sure to arrive, and it will certainly be wanted in early spring when there will be no opportunity of obtaining it unless provision has been made in the previous fall. All tender garden plants require some attention and provision should be made for their shelter during the winter. Some of this work can, however, be left until the next month. The flower stalks of all herbaceous plants should be cut off, and all other unsightly objects removed. Fertilizer is not now needed for plants within doors, but will be required later on. All plants should be thoroughly fumigated or sprayed for insects; this is a phase of garden activity for which there seems no end.

The chief satisfaction the garden lover has in October is the blooming of the chrysanthemums, this being the flowering season for outdoor plants. Cosmos also will now be in full bloom, in the early part of the month, and may reach maturity in September. The early blooming cosmos, which is coming so rapidly into favor, has somewhat destroyed the novelty of the late blooming variety, which gives such exceeding beauty to the fall garden, but its presence is always a delight, and this easily grown plant and the garden-grown chrysanthemum give a final brilliant glory to the outdoor garden season.

October is the month for peony planting, which will give much better results if planted now than in the spring. They should not be moved after being planted. Complete results are seldom had before the third year. But whenever successfully grown these plants are immensely ornamental.

The Bulb Planting

THE most important part of the October garden work is the planting of bulbs. Plant bulbs and more bulbs is the motto for this month. The wise garden lover will have made his purchases in September, and as early as possible, in order to secure the pick of the new stock. But whether bought first or last there is no limit to the value of bulb planting nor of the satisfaction that will be obtained from the results next spring. Like all good garden work bulb planting must be done in an orderly way with a definite view not only to the results that will come, but—and this is the most important aspect—with due regard to the habits of the bulbs and their manner of growth. The article by Leonard Gilbert on "The Autumn Bulb Planting," printed in the September number of AMERICAN HOMES AND GARDENS, may be read and studied in this connection; meanwhile, some other general hints may be given here.

A common error in bulb planting is to place the bulbs too near the surface of the ground. No bulb should be less than five or six inches deep, as many of them are forced up by the frosts and entirely lost. The deeper they are planted the later they will bloom, a useful hint for those who wish to obtain a succession of flowerings. Although a certain irregularity is sometimes affected in bulb growing the most satisfactory results will be obtained from bulbs of uniform size and weight. Bulbs whose flower stalks are known to have an average uniform height should be planted together, and any raggedness of appearance in blooming thus avoided.

Hardy lilies should be planted in the open in October, most of them doing better at this season than if planted at other times. The *Lilium candidum* should have been planted in August, and is the chief exception to October lily planting. Lily culture is not developed nearly as much as it should be by most garden lovers, perhaps largely because they are not planted at the best season. Few plants are so beautiful and give such exquisite results.

In choosing bulbs for the house care should be taken to select the best only, using the largest bulbs and named varieties. Hyacinths and narcissus are the most favored plants and give the best results; they are also the easiest to grow. The mammoth yellow crocus when grouped in pots makes a brilliant showing, and the Spanish iris is also sometimes used. Some varieties of gladiolus are also used for winter blooming and are very beautiful. Tulips are difficult to grow, and the beginner, at all events, must expect failure. Most growers will be spared disappointment by avoiding them altogether.

Most of the bulb catalogues contain cultural directions for bulb growing of all sorts, and the amateur without experience will find it best to follow these directions very carefully. There is no secret in obtaining success with bulbs if they are planted in the right way, in soil suited to them and under conditions adapted to their growth. They must, of course, be good stock or very unsatisfactory results will follow. Cheap bulbs are not at all suited to house growth, and are seldom available for the garden unless there is very ample space, and bulb planting can be proceeded with on a large and generous scale. When this is possible with good stock the results will amply justify any expenditure.

The Observer's Note-Book

The Cheap Cottages Exhibition in England

FOR some time past, almost as far back as the memory of living man extends and perhaps further, the building of cheap cottages for laborers has been one of the most serious problems confronting English landowners. It is a problem that has not yet presented itself in the same way in America. Our living problems are difficult enough, as every one is aware, but the great estate, as it is understood in England, upon which many laborers live and look to the landowner for housing if not for actual employment, has not yet reached us, and doubtless never will. But in England this condition has long been the normal one, and the difficulties of landowners to find a solution for it have puzzled architects and builders for many years.

Like most architectural problems, matters not architectural were the disturbing elements. The owner desired the modest return of 4 per cent. on his cash outlay; the tenant did not wish to pay more than $50 rent per annum; often he could not pay as much; frequently he was asked to pay more. On a rental of $50 a total outlay for building of $1,250 has long been regarded as the average. It is easy to see what happened; in most cases nothing at all was done, and the cheap English cottage became a national eyesore. Decay was inevitable; unsanitary conditions flourished in a hideous way. Then came the natural reaction. Boards of health and sanitary committees took a hand. District after district adopted stringent sanitary regulations. A public campaign was begun and continued, until the landlords realized its importance and woke up to what it meant. Reformation and progress became the watchwords, and the demand for a cheap cottage became not only insistent, but one of the architectural problems of the day.

It was long felt, and perhaps rightly, that a typical design could be secured for a cottage built within a certain limit of cost which might be available practically for all purposes and under all similar conditions. The demand was not unreasonable, for modern industrial conditions are such that a building of average material can generally be duplicated anywhere within reasonable limits at a figure not greatly in excess of the original cost. The theory was good enough; the difficulty lay in securing the desired design.

A most interesting effort to accomplish this purpose has just been made at an exhibition of cheap cottages held at Letchworth in Hertfordshire, near London. More than a hundred cottages were shown in all, and the exhibition and the discussions aroused by it excited very general interest. Prizes were offered for buildings of specified types, and four general classes were arranged for. These comprised (1) cottages costing £150, (2) pairs of five-room cottages costing not more than £300, (3) the best group of three or four cottages costing not more than £35 per room, and (4) cottages or pairs of cottages costing not more than £35 per room. The cost in each case was to be calculated exclusive of the architect's fee and the builder's profit.

The chief interest centered in the £150 cottages, which were conceded to be the class of dwellings most particularly desired. It may be questioned whether, in offering prizes for a house of a specified cost, the best results were obtained. Not a few of the buildings so designated could not, admittedly, have been reproduced elsewhere for the same sum; the very statements of their builders, as given in the catalogue, were extremely cautious and many of them were built with such thin walls as to arouse doubts as to their availability as winter residences. A different procedure would have been to have offered prizes for the most economically built cottage which would be both comfortable and weatherproof and large enough to accommodate a certain number of persons. In this case the builders would have fixed the cost, the figures might have withstood severer scrutiny, and a really economical design might have been secured.

This, however, was perhaps less important than the greater fact that a large exhibition of actual cottages, built for exhibition and practical purposes, had at last been carried to successful completion. That honest efforts had been made and could be made to build cheap laborers' cottages was now demonstrated in the most complete manner possible. As an exhibition of practical architecture for the people it has not been surpassed, and it marks an effort that must have very great influence in developing the small house of low cost in the future.

Singular as it may appear, the somewhat predominating note in the whole exhibition is one of affected picturesqueness. A true picturesqueness is the leading quality of the little old English cottage, a quality they were not intended to have, but which they have acquired because they could not help it —because of the mellowing influence of time and of the unpremeditated way in which they have been absorbed into the landscape. This is a quality which could not possibly be acquired by the makeshifts of modern architectural design, by the constant use of the high-pitched roof, by lofty dormers and gables, by false half-timbering and other devices, all of which were freely used in the buildings at Letchworth, and all of which, it is needless to say, were entirely out of place.

Two leading characteristics were immediately apparent. One was the question of design, and the other the use of materials. That a cottage should be pleasant and attractive to look upon was perhaps insisted on with needless reiteration. The question invariably presented itself, Can this house be built for the sum designated, or has some cost been added, that it may have a certain beauty which, after all, was more or less forced? Beauty is a very important part of any household structure, but in dwellings of low cost it must be subordinated to price, to sanitary considerations and to convenience. If, after these matters have been duly considered and admitted in the treatment, a genuine, even if homely and unpretentious beauty can be given to the house, a very admirable degree of excellence has been secured. The Letchworth buildings did not always meet these criticisms in as full a manner as it was hoped they would, although it should not, in any sense, be regarded as unproductive of good results. The results did not simply go as far as it was reasonable to hope they would.

The use of special materials, of patented devices and of other constructive aids to buildings was another special feature of the exhibition. Some of these materials were shown for the first time in practical application. Their use, in a general way, was occasioned by the double desire of reducing the cost of the structures shown and of adding to their utility by bettering their sanitary condition. The really important point made in this connection was that the demand for economical building and for sanitary homes is stimulating the use of artificial or special preparations which may, if found durable and effective, drive out natural materials in many future building operations. It is yet too soon to see how far this will be done.

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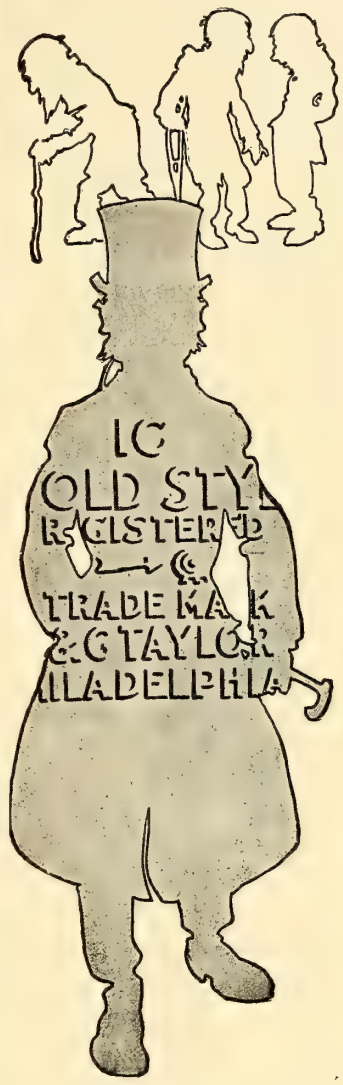

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THE ARCHITECT AND HIS CHARGES

(Continued from the September Number)

This is an impressive series of figures, of figures generous in suggestion, and more favorable, it might seem, to the architect than to the client. Yet the men who prepared this schedule have, time and again, demonstrated the value of what they have given for their money, for they have produced some of the most notable buildings in this country, both public and private. It may be there are architects who will do this work for less money, but it will not be the work these men do. It may have every excellent quality, but it will not have the particular quality that makes the charm and interest of the work of the authors of this schedule.

And this touches at once on the chief drawback of the percentage charge for architects' services. It places all architects on the same level. It is a charge based on mediocrity. It gives the poor architect more than his intellectual services may be worth; it deprives the great architect of due recompense for his own individual qualifications. The great physician and surgeon can charge more than the unsuccessful man; the great lawyer sends in altitudinous bills, which indicate rather his own estimate of the hole he can safely put in his client's fortune than the real value of his services—a perfectly legitimate performance which has had the most eminent support and exemplification.

But the great architect, the man who is truly great, great through personal qualifications and not through the extent of the business brought into his office—this man can not, by the rules of his profession, charge more than his most indifferent brother. It is true, the official schedule calls the five per cent. a "minimum" charge, but this is an agreeable fiction, for the architect who actually gets more, in the usual run of work, is exceedingly rare, if not wholly unknown.

Of all the great professions that of architecture alone has been brought to the basis of a trade union by the uniformity of its charges. The lawyer and the doctor, the engineer and the teacher, the painter and the sculptor, the clergyman and the editor, even the clerk in an office, can regulate his charges by his ability. Not, of course, that the able man is always well paid; he rarely receives adequate compensation, and never at all, judged by his own standards; but the able man in any profession, save that of architecture, can charge what he may and what his services will command. The architect can do nothing of the sort. Certain architects have certain vogues; some are more sought after than others; the work of some architects are more often seen in work of a certain class than the work of other men—a sure indication that they have a vogue and a certain amount of appreciation—or is it because they are the fashion? But the hated five per cent., which in the early days of his career appeared so generous and so ample, now in the heyday of his fame is totally inadequate.

And rightly so. The practice of architecture is an intellectual profession which can only be successfully pursued at the expense of much valuable gray matter. The architect must not only have clients to succeed, but he must think and toil with his brain. He must know all about many different things. He must know what others have done, and when and how they did it. He must be up in science; he must be in touch with processes; he must know how to build; and, above all, he must know how to design. The latter is a purely intellectual accomplishment which is not readily valued in money.

But an architect can only think a certain number of hours a day, which means that the products of his imagination are limited in number. His assistants will increase in number with the increase of his practice; his own individual contribution to each work will become less and less as the business grows. And it must grow if he can make it, in order that his income keep pace with his desires or in order that he may provide himself with a competency for old age. He can not do this by putting up his charges, as any other laborer would do when he found his services more and more in demand; for there is A and B & D across the street, very competent men, who will do just as good work as he will for the regular Institute fee of five per cent. He can not charge more with increased popularity—he can only expand, and expand, and expand, spreading out his own effort thinner and thinner, giving less and less to each client, putting less and less of himself into each job.

He can not help it There is nothing else to do. And this is the real grievance of the architect in the matter of charges. This is the reason why the five per cent. seems to him so inadequate and is so inadequate. It keeps him within artificial limits. He sees other men in other professions gaining larger and larger incomes for the same effort as the value of their services becomes better known and as they are the more able to pick and choose their work. He can do none of this. His regular charge for straight work is five per cent., and that is the end of the whole matter.

One significant aspect of this five per cent. business remains to be pointed out. It limits the architect in his charges, but it does not limit him in his work. The architect who has a million dollar job to do gives more for his five per cent. than he does for a building costing but $10,000. There is more to do, and it must be done, or he will be a professional failure. It is a magnificent tribute to the integrity of the profession that this should be the case.

Architecture, therefore, is a profession whose financial returns are not fixed and determined by the value of the work done, by its merit, its distinction, its real worth, but by the amount. It is a profession that estimates its returns by wholesale methods. It is composed of many much underpaid men, and it contains some laborers whose annual incomes are scarcely short of princely. These conditions, of course, obtain in every calling.

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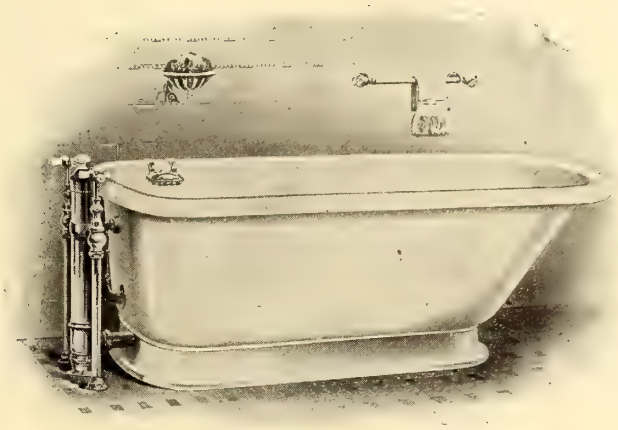

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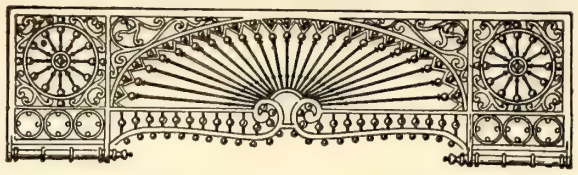

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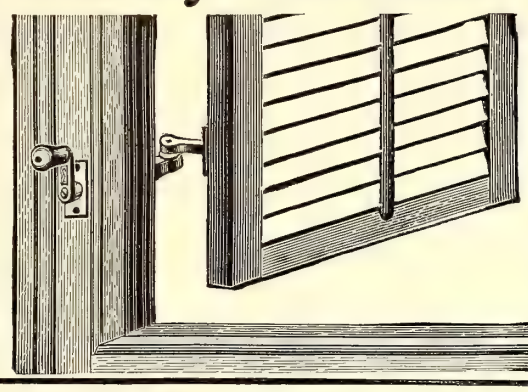

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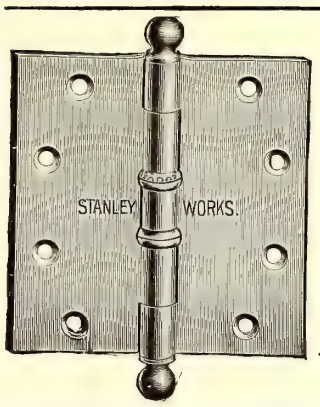

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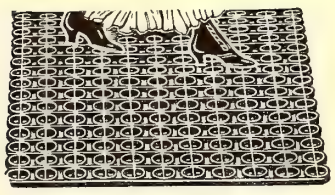

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ARTISTICALLY the choice between paper and paint depends upon several considerations. While walls simply painted unquestionably look bare in comparison with those covered with paper, this is sometimes an advantage, as in summer cottages, to which they give a feeling of space and air, and in rooms containing a large amount of furniture, where they improve the effect of the furniture by affording a plain background. Where pictures are to be hung also, either a painted wall or a plain paper is much to be preferred to a figured paper, which would produce a sense of wearisome confusion.—T. M. Clarke.

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THE charm of the camps in the Adirondacks and Canada woods, luxurious and costly as some of them are, lies in the fact that, although every comfort is provided, nothing suggesting care is introduced; nothing that would imply interference with the free enjoyment of the woods or the untrammeled life of those who have gone there for rest and refreshment. A satin hanging in a camp would be inappropriate; ebonies, mahoganies, costly inlaid woods as much out of key as an elaborate service of silver and glass.—Lillie Hamilton French.

15. Treatment of Pine Floors

HARD pine floors should be first filled with white shellac—in proportions of two gallons of shellac diluted with one gallon of wood alcohol—and after two coats of shellac there should be one or two of fine varnish. Sweeping with a long-handled hair broom is light, quick work, and the floor should be wiped with a damp cloth once a week. If such a floor is rubbed twice a year with paraffine oil it will lengthen the time for redressing. Chestnut stairs should be treated the same, but chestnut is a more porous wood, and it will require more of shellac filling. Kitchen, bathroom and laundry floors are best oiled about once a month. Boiled linseed oil and turpentine, mixed half and half, make an excellent oil for this purpose. Soft pine floors should be painted, but hard pine never, as the paint will peal off in spite of almost any precautions. —Delineator.

16. The Pitch of Roofs

WHERE the pitch or angle with the horizontal of any roof covered with shingles, slates or tiles is too low, drifting snow will blow up under them, unless they are laid in cement, and melt there, often causing a small leak; and the shingles on low-pitched roofs soon rot out on account of the slowness with which rain-water drains away from them. The minimum pitch for such roofs should be 26½ degrees, or "quarter-pitch," as the carpenters call it, the rise of the roof being one-fourth of the span, and a higher pitch is much to be preferred; and, unless the pitch is very steep, shingles, or slates, or tiles should be out on over two layers of waterproof felt, tacked to the roof-boarding.—T. M. Clarke.

NEW BOOKS

Picturesque English Cottages

PICTURESQUE ENGLISH COTTAGES AND THEIR DOORWAY GARDENS. By P. H. Ditchfield, F.S.A., F.R.H.S. With a Prefatory Note by Ralph Adams Cram. Philadelphia: The John C. Winston Company, 1905. Pp. 112. Price, $2.00 *net*. Postage, 20 cents.

For sheer pure picturesqueness few buildings surpass the little old English cottage, the mimic building built, in most cases, without thought of effect, without regard for environment, without purpose to please, without a single underlying idea than to be a simple home in a quiet, unpretentious, simple way. As a matter of fact, this one idea is quite sufficient to serve as a basis for good home building in all times and ages and under all conditions, but the modern searcher after the utilitarian rarely reaches picturesque forms, certainly nowhere approaches the satisfying charm of these very charming old English houses.

Yet it would be a mistake to assume that this charm simply came of itself and without guidance. It would be easily possible for the analyst to indicate several definite circumstances that have produced the final resultant. There was simplicity first and all the time, no manifest effort, no thought of form, no idea of being other than a simple little house. Being small houses there was no effort at expansion; they were built low and neat, within the compass of a narrow pocket. The native materials of the soil were used, just such materials as, in many cases, could be had for the taking. Hence cottages in different parts of England have quite different and thoroughly characteristic forms and features, for the house must be built as the materials permitted. Because native materials were used the finished dwelling set well with the surrounding landscape; it was but part of the landscape put into a new form. And with all this was a native natural taste; no understanding of great things in art, no knowledge or appreciation of art, but a quiet natural taste that simply would not go wrong, and which used such humble materials in so humble a way that it was impossible to step far aside from the simplest path.

And to all this must be added the overwhelming advantage of old age. Newness is one of the most difficult qualities to handle in an artistic way; in a certain sense it is an artistic impossibility. Just how we would regard the old English houses were they brand-new is impossible to determine. Fortunately this is a purely academic question, of no value at all before the great wealth of picturesque fine old houses that still remain in England: houses of every size, great and small; houses of every cost, large and little; houses built at one time and houses added onto, changed, bettered or even made worse with succeeding generations. England is a rare country for old buildings of every sort, albeit it is active enough in modern undertakings. And then the great natural beauty of its scenery, the deep greenness of its rain-soaked fields and lawns, its rich flowerings, its fine gardens—one need not step off English soil to view the uttermost delights in all that appertains to the house and garden, in fine and beautiful form.

That England is full of beautiful old dwellings is doubtless known to most travelers, but the singular beauty and penetrating charm of the cottage, of the small dwelling house, is perhaps less fully appreciated, and Mr. Ditchfield's beautiful book, dealing with a subject he has somewhat made his own, is, therefore, very welcome. Given a handsome dress by its

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A rich, substantial, and elegant effect in Leather and dark Rattan

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Catalog H shows and describes many of our ornate and attractive designs in REED AND RATTAN FURNITURE—for every purpose—and prices.

Catalog 8 pertains to the well-known Heywood-Wakefield lines of children's go-carts and baby carriages, which we also make, and are without an equal.

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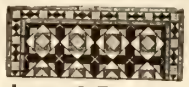

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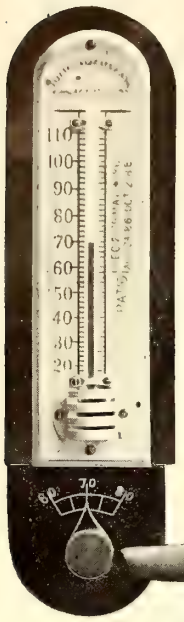

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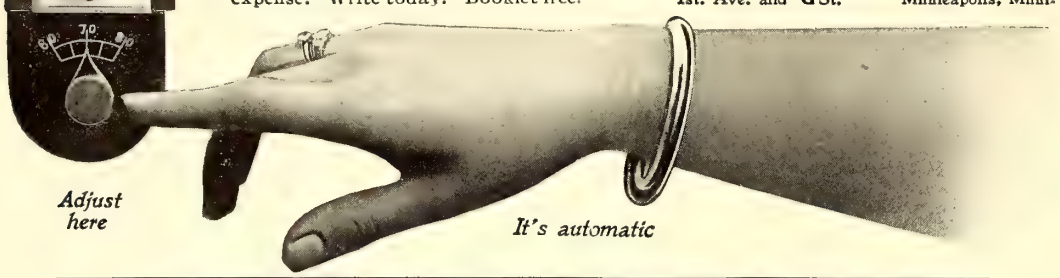

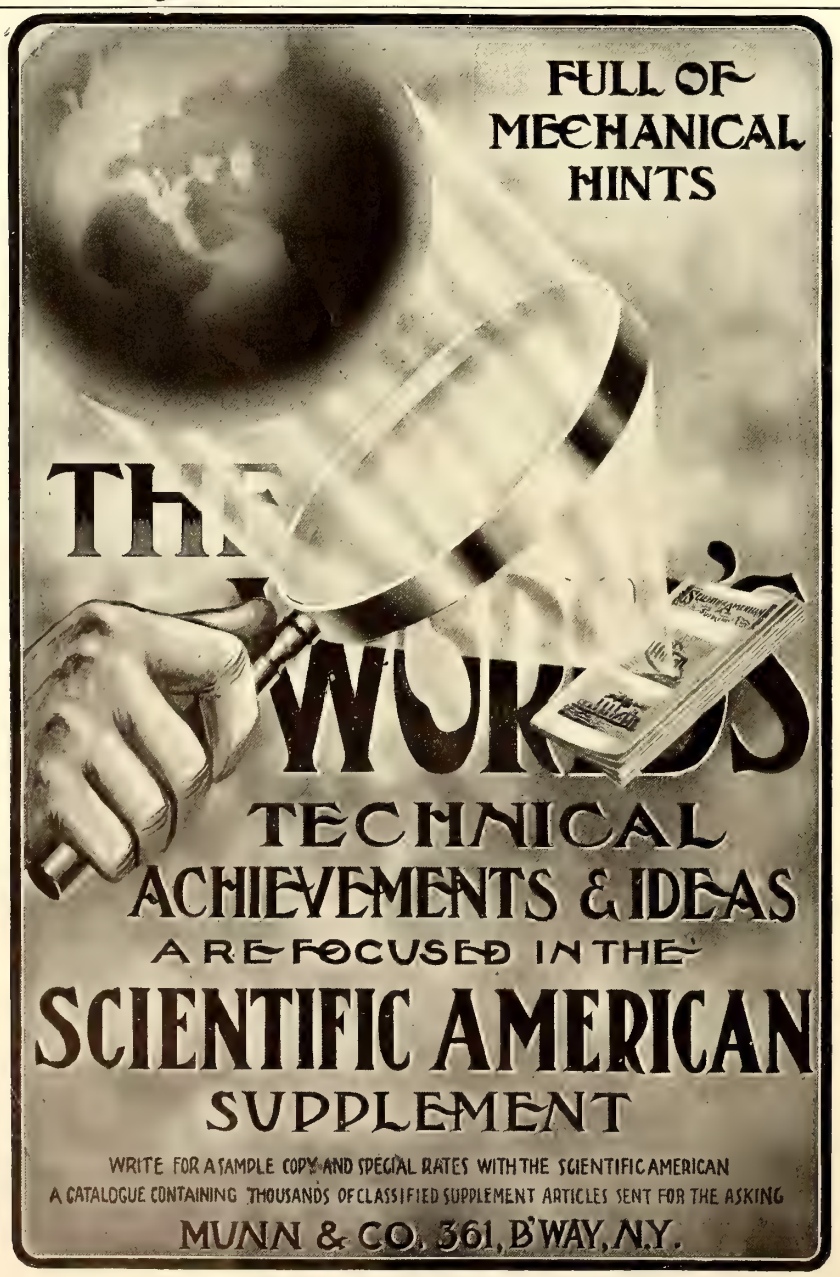

publishers, illustrated in an abundant and almost lavish fashion, and dealing with as picturesque a subject as the whole field of architecture supplies, it is a book of real delight.

Mr. Ditchfield makes no attempt to cover the whole field of cottage architecture in England, or even to treat his subject historically; his book is rather a comprehensive survey of the whole subject, and the reader, who will not willingly put it down until he has finished it, will close the volume with a fair knowledge of the full range of the subject, and a greatly enhanced notion of the picturesque qualities of these fine old buildings.

Mr. Cram's brief and historical note is followed by an introductory chapter which is succeeded by a study of methods of construction. Then come chapters on Roofs and Chimneys, The Cottage Garden, Flowers of the Gardens, The Evolution of the Cottage, Strange Survivals—Geology and Variations in Style, Foreign Influence in Cottage Architecture, Windows and Folklore, and Shops, Inns and Historic Cottages. In a general way, therefore, the subject is amply covered, and is presented in a highly intelligent and interesting way.

The illustrations in this book, which are both numerous and very beautiful, immediately suggest the great differences which exist between modern buildings and old, and between buildings in England and those in America. Of the modern cottage, the modern cheap cottage, built by rule, in the simplest way and with an astonishing regard for ugliness, our author has nothing but a righteous contempt. The problem of building cheap modern cottages does not yet seem to have been satisfactorily solved. But the difference between houses in England and houses in America is brought out with greater startlingness. America has some few old houses, and some of these we sometimes think have considerable individual charm. But England is filled with delightful old houses, as unpretentious as you please, but meeting the eye of the traveler at almost every turn of the road. If this be not literally true they are at least so abundant that there is always some interesting old house to see, giving charm and variety to the landscape to which they belong and of which they are a part. We have nothing to place in comparison with these buildings; and, while we might not care to live in them, might, indeed, find them completely unfitted for modern use, the very sight of them fills one with envy and regret that they are not at one's own doors.

Growing Roses

ROSES AND HOW TO GROW THEM. A Manual for Growing Roses in the Garden and under Glass. New York: Doubleday, Page & Company, 1905. Pp. 189. Price, $1.00 *net*.

There is an abundance of useful information concerning rose culture in this little monograph, which is announced as Volume I. of "The Garden Library." It is packed with practical knowledge from beginning to end, touching on every topic valuable in rose culture and presenting its facts in a plain, direct way that not only appeals immediately to the amateur, but which is precisely the kind of information, put in exactly the best way, that rose growers need.

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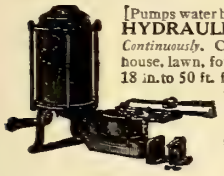

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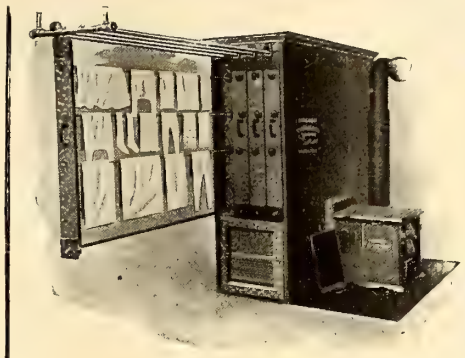

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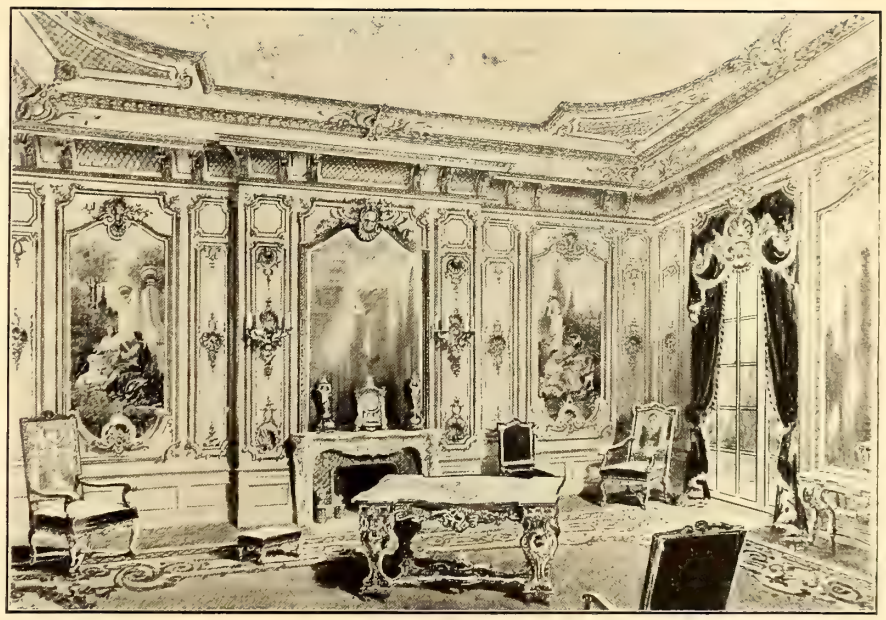

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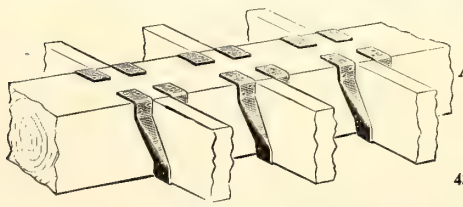

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CORTRIGHT METAL SHINGLES

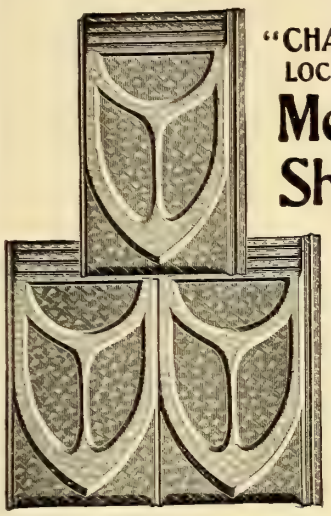
book that finds its way into print. The name of no editor or author is attached to this book on roses, although the preface states its contents is made up from sundry periodicals issued by its publishers, and the names of some special contributors are there given. As this is the first volume of a "Library," it is to be hoped that less modest persons than those responsible for the present book will be obtained for later numbers.

This book is not concerned with the esthetics of rose culture, but aims to tell, in as concise a manner as possible, how they may be grown and under what conditions success can be obtained with them. It begins, therefore, with a useful chapter on when, where and how to plant. These subjects are treated with much minuteness, hints on the soil, on making beds, on handling newly arrived plants, and other topics being given. A chapter on the routine of work tells what to do during the various months of the season. Pruning, insects, diseases and spraying come in for their share of information. A calendar of labor in the rose garden, prepared with especial reference to the latitude of New York, is a practical feature of great value. Roses for cut flowers under glass, types and races, roses for special purposes and roses of American origin complete the list of special topics, though the bare mention of them hardly sets forth the wealth of practical knowledge, the many useful hints and other items of value which the book contains. The illustrations are intended to elucidate the points presented in the text, and do so in a thoroughly sufficient manner. An index adds to the usefulness of the book.

PUBLISHERS' DEPARTMENT

Metal Shingles

TO THOSE who do not wish "to play out the tragedy" of the old roof to the end, who desire information as to the best material to cover a new home, or seek for points on ornamentation allied to service, and who do not trust instructions they may have at hand, the possession of a good catalogue or kindred literature is often the solution of the question. The issuance of booklets in a shape that avoids the inveterate form and traditions of the usual catalogue is rapidly augmenting our practical and artistic knowledge of the various trades. Frequently they are merely accessories or pioneers to the standard catalogue, and in a bright and familiar way make one interested in the bold and solid presentations of the weightier companion. Sometimes the paper issued takes on the dignity of a monthly publication, generally illustrated and fairly bound. This phase of showing the qualities of an industry with pictorial assistance is conjointly given in the series of publications printed for the Cortright Metal Roofing Co., Philadelphia, Pa. A booklet, "The Cortright Paint for Metal Shingles," deals with the subject of preservation of roofs in a manner of interest to every property owner. These paints were put on the market eighteen years ago, and have stood the hardest tests, and while prepared particularly for these metal shingles, are yet adaptable for all kinds of roofing. The manufacturers claim that the paint will neither scale nor peel, and that roofs once covered with it are good for four or five years without further attention of this character. Every part of a Cortright metal roof —metal slates or Victoria shingles, ridge-coping, hip-covering and valley—is painted with this material before it leaves the factory, and it is done by dipping each piece separately in the vat full of paint. The goods are allowed



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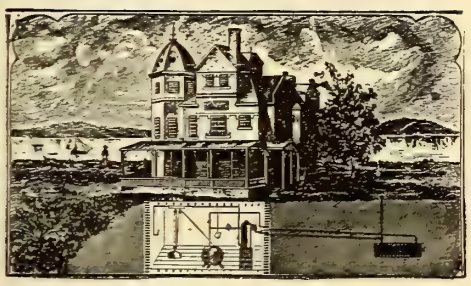

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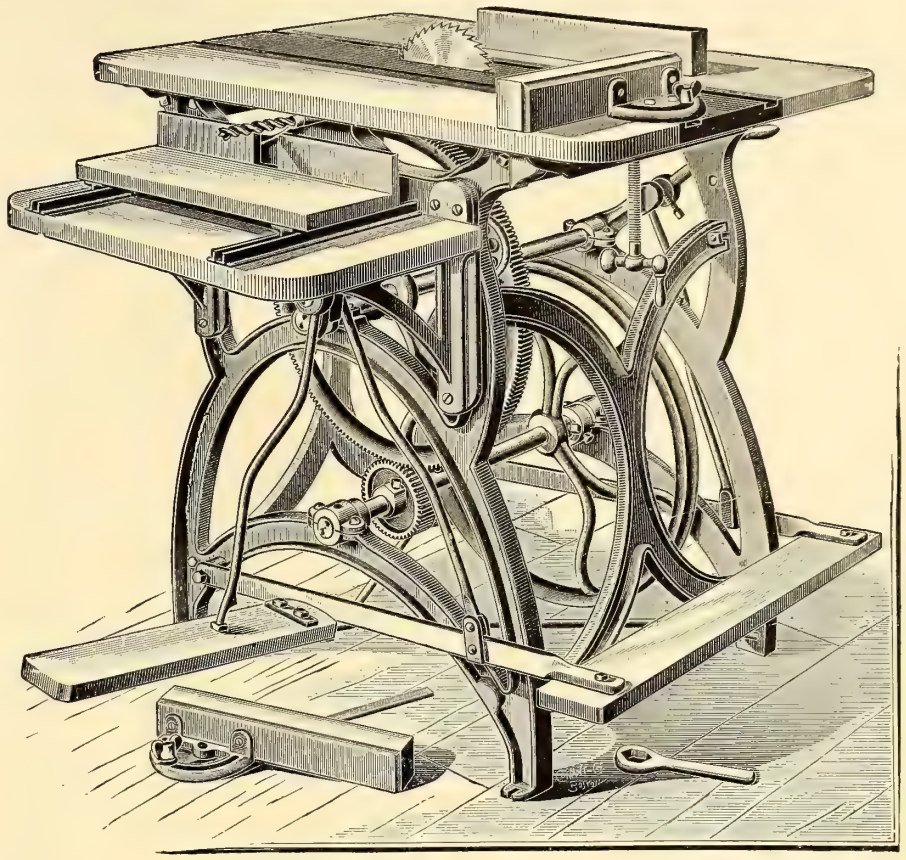

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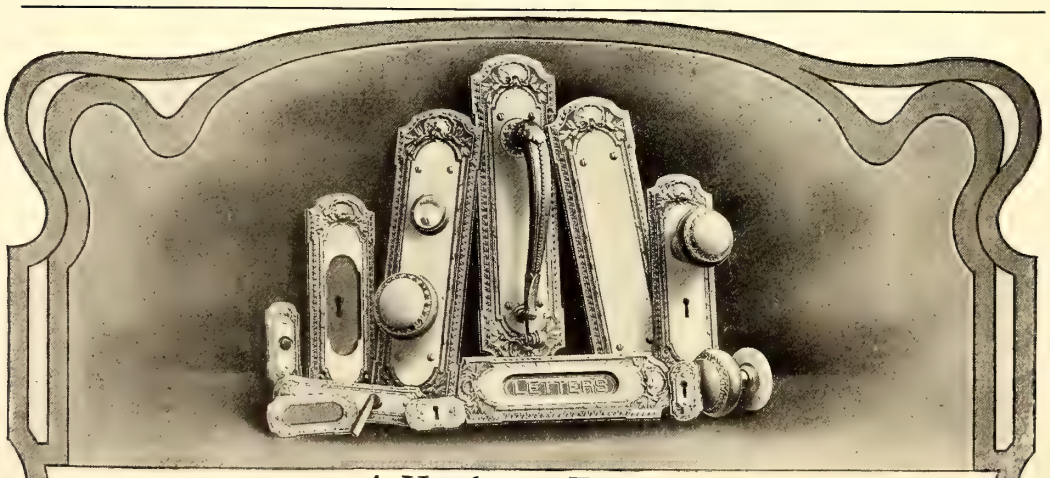

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to stand several days for slow drying before shipment in boxes. "Concerning That Roof" is the title of a thirty-two page book, very handsomely illustrated and replete with ideas and suggestions. The arguments put forth in favor of metal shingles are arranged in such a clear and concise manner that it should prove a valuable reference to all having charge of the erection or care of buildings. The book shows the construction of patented joints, which permit each piece to contract and expand, while still remaining weather-proof; how it can be taken off and relaid on another roof without damage or waste; compares the shingles with slate and wood, what they are made of, how expansion and contraction are provided for, and many other practical points. The illustrations are freely given and are executed in a style equaled by very few in this class of work. Cortright's Metal Shingle Advocate is a little periodical, beautifully illustrated, and mainly a medium for showing the general and particular points of the industry. As the duty of a roof is to keep out the rain, snow, sleet and wind, and to make an ornamental finish to a building, all particulars when presented in the clear manner of the above literature should be in the possession of the owners of buildings. The booklets noticed here are easily obtained by sending a postal to the firm at its main office, Twenty-third and Filbert Streets, Philadelphia, Pa., or No. 134 Van Buren Street, Chicago, Ill.

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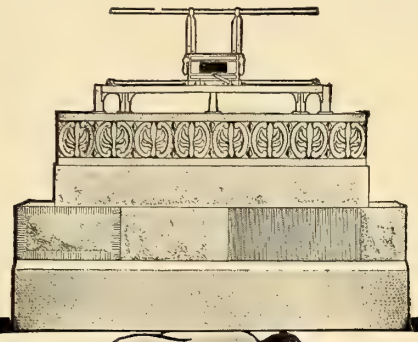
NEITHER the luxury nor the necessity of the lavatory is to be neglected, according to the recent and growing determination of architects and builders to specify installations, as numerous as from five to ten throughout the bedchambers and sleeping-apartments in homes. This extension of the number from the one or two fixtures ordinarily in use is the direct outcome of the improvements in modern sanitation as developed by the best plumbers. We name the Standard Sanitary Manufacturing Company, of Pittsburg, Pa., particularly on account of the present perfection of the firm's output of special features in one piece lavatories. This house has been engaged in the production of guaranteed porcelain enameled sanitary ware for more than a quarter of a century, during which time it has devoted immense amounts of money to exhaustive experimental tests and processes, and employed mechanics and experts long in service, whose skill and knowledge enable them to select the proper materials and design the most substantial and presentable patterns for hygienic and ornamental improvements of rooms. In all this time it is a striking justification of the enterprise of this firm that no sorely needed innovation nor reasonable luxury of its output have been proved violative of the wants and tastes of a well fixtured home. As rapid as is consistent with sound principles of the plumber's craft and the demand for the goods, the managers have introduced those apparatus that compete to excel only their own former standards. Look at the type of lavatories, for instance, shown in the engravings illustrating this article. The first pictures a "Standard Copley," 1035 G, porcelain enameled, with oval slab, bowl and apron, all cast in one piece; porcelain enameled pedestal, "Torrance" pattern, nickelplated Fuller faucets, with china handles and indices, and nickelplated imperial waste with china index.

The other represents the "Standard Copley," 1036 G, with oval slab, bowl and apron, cast as the above, nickelplated legs, with wall supports, low pattern compression faucets with

A New Industry



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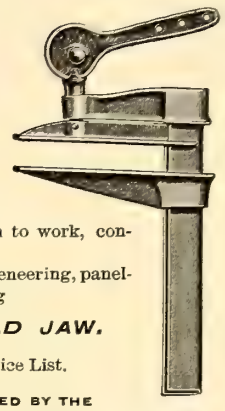

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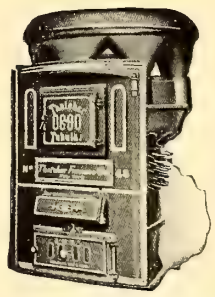

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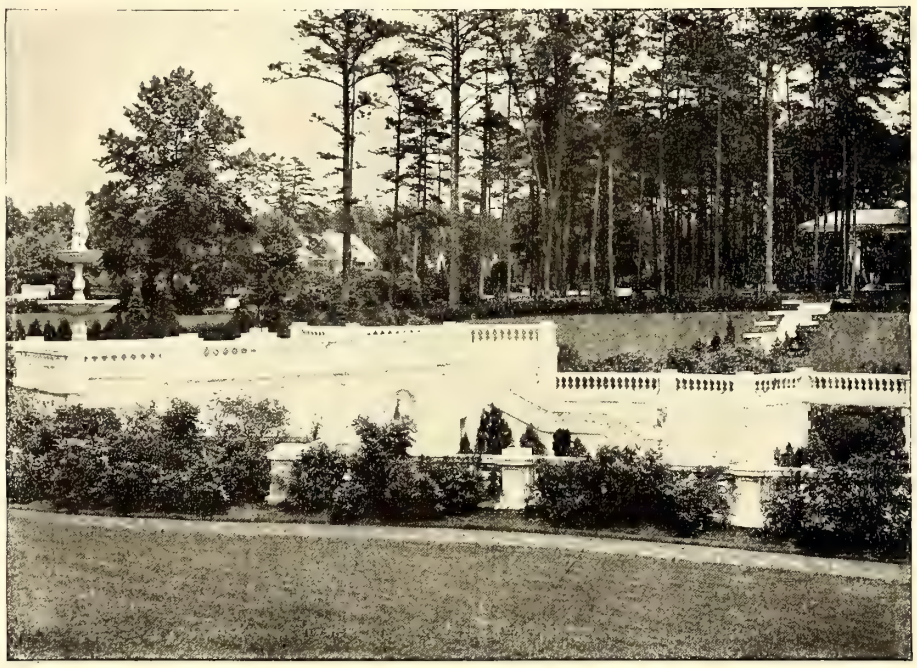

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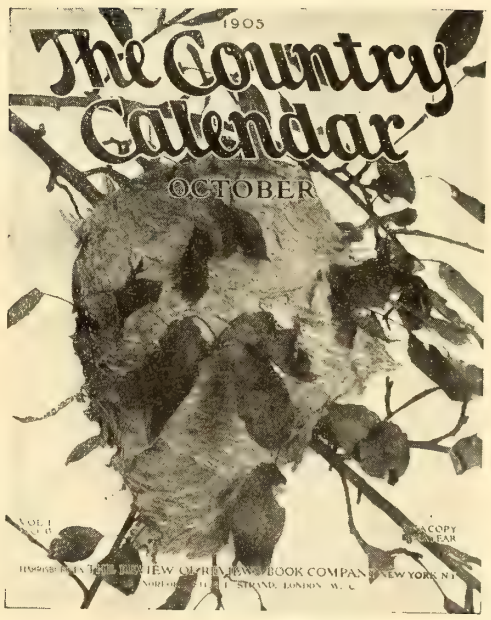

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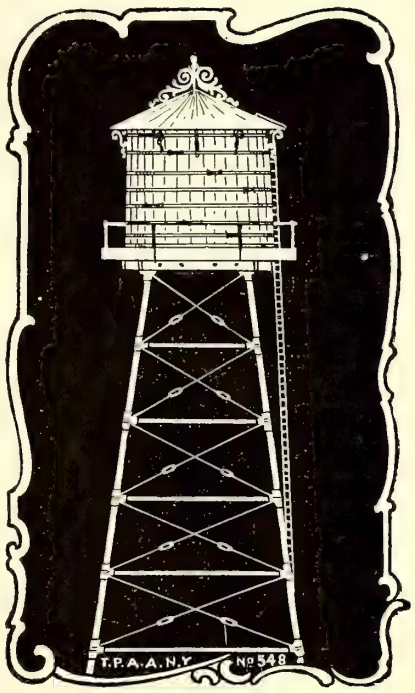

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ing or having bathrooms installed to be able to view the styles and sizes of these lavatories. The assortment of nickelplated brass trimmings was never so complete as to-day. See the patterned grace of the nickelplated brass legs and frames designed for the "Copley" and "Lenox" types, also the legs for use on one piece lavatories supported on concealed wall hangers. On examination of the various exhibits it will be seen that the line is unsurpassable and of sufficient variety to meet the taste of any one. Besides lavatories for homes, the visitor will see these articles designed for use in alcoves, closets and wardrobes, in offices, hotels and public buildings. The "Recess" is an example of this class, and is made in two sizes, the larger 21 x 31 inches. For factory and institutions in general will be found a porcelain enameled lavatory for use in corners of rooms, the total length of the piece being 14 feet, 7 feet from the corner to each end. For barbers, schools and public toilet-rooms, the "Duo" design, one of the very newest creations, with two complete fixtures in one piece; also the "Tonsorial Sectional Lavatory." Each of its sections is a complete one-piece article in itself, and the different sections are permanently secured by nickelplated union strips. In their way, as interesting and important as the above are the laundry trays and kitchen sinks, porcelain enameled and fitted with the accessories recently developed by the designers of this branch of the great industry. The goods mentioned and the general output may be seen to decided advantage also by procuring the great catalogue and the monthly parts of catalogues. No finer work has ever been reached in this or any other line of manufacturers' printed matter. This unsurpassable catalogue and the periodicals are issued by the company's publishing department. The numbers form a sequence of art and typography devoted to the interests of modern sanitation, that admirers of good form in illustrated and descriptive business literature will not willingly see decline. Address the general offices, Standard Sanitary Manufacturing Company, Pittsburg, Pa.

The Story of an Industry

IN a highly specialized industry like the valve and fitting business the manufacturer must be constantly designing and building labor-saving machinery, must be always improving the quality and design of the goods produced, and must bring out new lines of products as rapidly as the growth of trade demands. With these facts ever in mind, he should devote himself assiduously to the study of the mechanical features involved in the enterprise, early recognize the importance of system, and be alert at pioneering in any direction of industrial effort in his line of work. This policy has always been followed by the Crane Company, established in Chicago in 1855. Mr. C. T. Crane, its founder, opened a brass works in the corner of a lumber yard. Sand was obtained on the premises, and the first castings were couplings used in connecting lightning rods. Soon he went into the making and finishing of brass goods. A foot lathe was purchased, and the manufacture of brass engine trimmings begun. A few months later a room with power was rented and early in the next year a small three-story frame building was rented and equipped for power with a six-horse power portable engine. Another year and jobbing in wrought-iron pipe and fittings and steam warming work was taken up. Civil war demands created an enormous call from the Government for all sorts of materials. The brass plant was enlarged for the purpose

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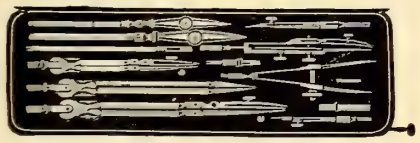

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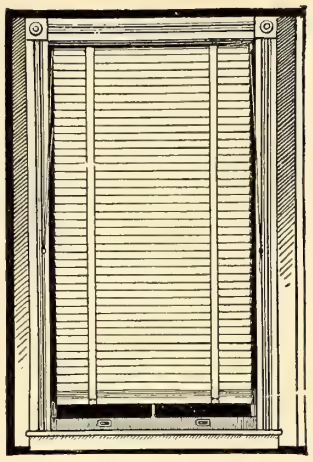

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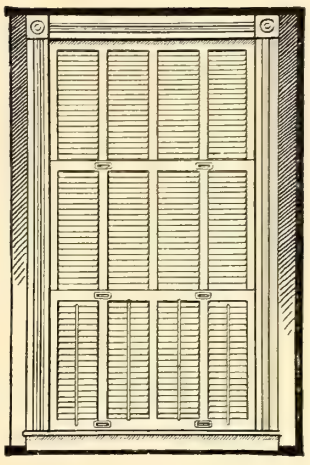

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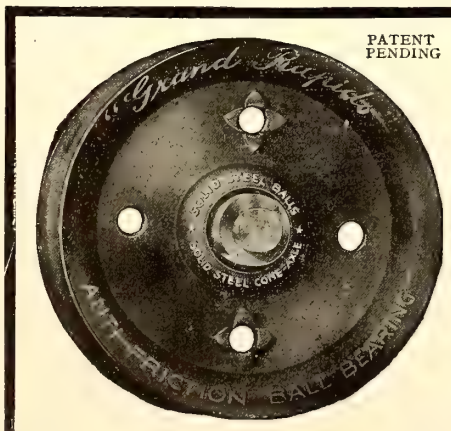

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of manufacturing brass globe valves, check valves, steam and gas cocks. An iron foundry was started, and in a small way the building of machinery and the making of a few articles belonging to the steam fitting line was undertaken. About this time a small butt-weld pipe mill, the first mill west of Pittsburg, was built on ground where the company still has a pipe mill, and where the present brass department is located the first malleable iron foundry outside of the Eastern States was started. This foundry was on the second floor, and it is claimed to be the first instance of a foundry being placed above the ground floor. The fitting industry was then in its infancy in this country. Most of the fittings used were wrought iron and imported from England. About this time the three-way tapping machine was invented. Two, with original improvements, were built by the Crane Company and installed in its shops. In connection with the fitting business the company early took up the manufacture of dies and die plates. In 1865 the business was incorporated. In 1870 another building was erected, and in 1881 another pipe mill, near railroad facilities. One lap-weld and two butt-weld furnaces were added. In this mill Siemen's Gas Furnace was employed in the manufacture of lap-weld pipe. Some years later its machinery was transferred to Pittsburg. The mill was then rebuilt, and the malleable iron and gray iron fitting departments were moved to it, leaving larger space in the old building for the brass shop. Although the company was concentrating upon the manufacture of valves and fittings, the continued growth of the business demanded extensive additions from 1891 to 1903, and in the latter year a five-story modern office building was finished. In 1857 it entered the steam warming field, manufactured at different times heating coils, wrought-iron pipe radiators, cast-iron radiators and ventilating fans. Believing it was not fair to compete with the trade to which it was selling, it retired in 1874 from the steam warming contract business. Elevators were made by the firm as early as 1867, and the business grew so rapidly that it soon crowded other work out of the machine shop. In 1870 passenger elevators were commenced. In 1886 this part of the business was incorporated as the Crane Elevator Company, and given a complete plant by itself. Ten different types of elevators were introduced. In 1895, with a view to concentrating on the valve and fitting business, the Crane Elevator Company was sold. The growing demand for air-brake parts led to their manufacture, and in 1891 a full line was carried, and the company, at the Columbian Exposition, exhibited a complete air-brake equipment. General business was developing so rapidly, however, that the air-brake parts, being a distinct line in itself, was abandoned. In 1865 it manufactured pulleys, shafting, steam engines and steam pumps. A Corliss engine was built and installed in 1870, and has been in service until the present time. The company, after the great fire, put several pumps along the river and forced water through the city mains. At present machinery is not manufactured for sale, but there are a machine designing department and a machine shop in which special machinery is built that is needed in the business. This great company has, from its inception, constantly added to the varieties and sizes of the products made. Some of the important classes of goods put on the market in more recent years have been stationary, marine and locomotive pop safety valves, drainage fittings, Ferro steel flanged fittings and valves, ammonia fittings, steam traps, steam and oil separators, malleable and Ferro steel companion flanges, electrically and hydraulically operated, and steam actuated

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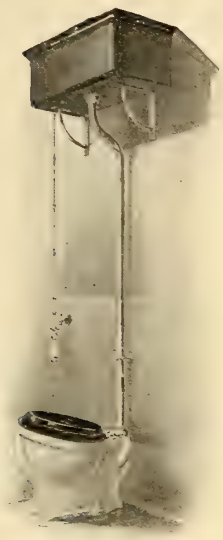

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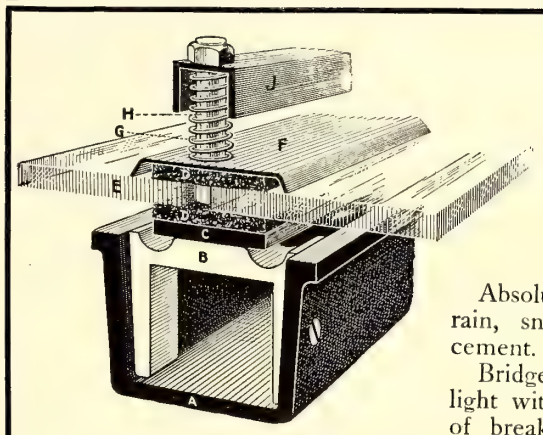

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Sheet Metal Tile

A STUDY of the current research in the field of architecture shows that there is warrant and justification for the stricter attention now given to roofs. That it is possible in many cases to make this area the shining mark of a building should not be, unless durability is made an indispensable condition of its success. But signs are not wanting to show that fashion does not always favor fine looking material at the expense of wear and tear, nor is it to be lost sight of that the maximum of production of poor stuff has passed with the advent of recent improvements. Let us take, for instance, the art and quality of metal tile roofing, as demonstrated in Spanish and Mission designs now adopted on a wide range of structures, counting from the almost unpretentious to the most important. A step farther leads us to notice that an enviable share of this advance is due to the artistic, ornamental and stanch products of a Western firm, the W. H. Mullins Company, of Salem, Ohio. The designers at this extensive plant, realizing that the exquisite curves and lines, heights and valleys, and resultant lights and shades of the ancient roofing tile give the effects desired for a perfect roof through sheet metal tire, have worked for the retention of all the old points of beauty and made the improvements needed by overcoming its numerous mechanical defects. Almost from the introduction of the sloping roof in architecture terra cotta roofing tile has been used, and as an artistic and effective material has never been surpassed, and where climatic changes are not as serious as in the United States will likely never be equaled. But here, where the differences of temperature and moisture are so extreme and sudden, and the expansion and contraction of all building materials are so difficult to counteract, its all-round success is, and will be limited. The introduction of metal into means for preserving the attractiveness of a material not quite agreeable to the exposures of our weather influences is valuable from the point of view that the beauty of an

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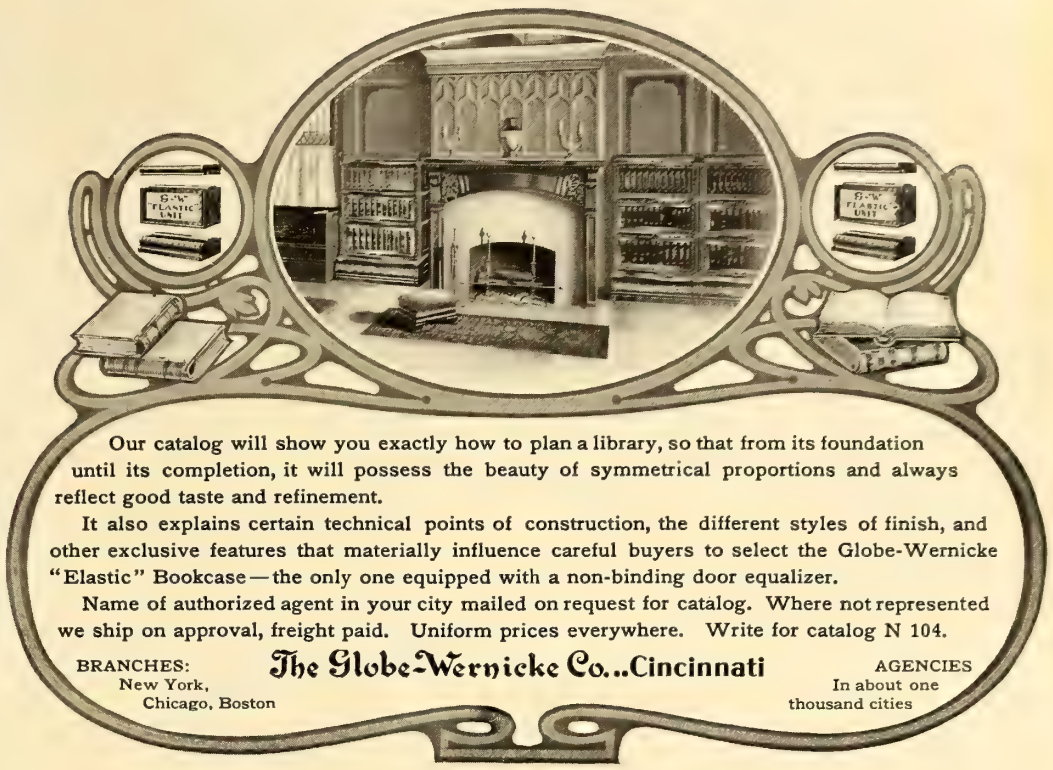

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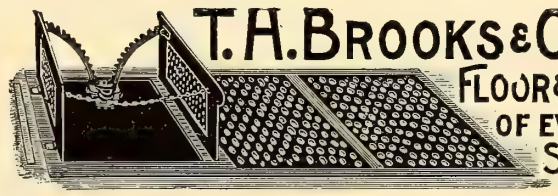

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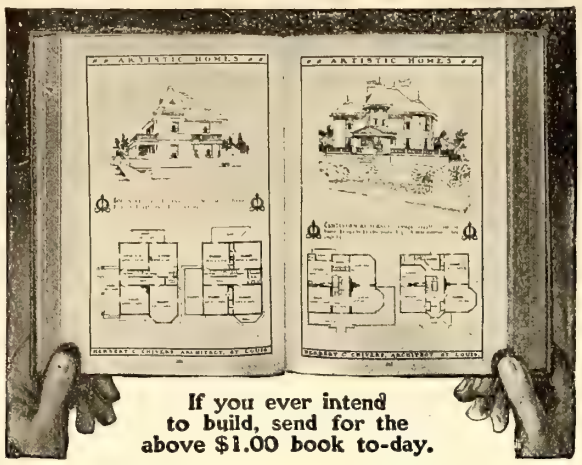

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art so undeniably cast in the mold of grace is not to become lost. Mechanical genius gives the practical substitute. The faultless rhythm and unity of plan standing out in varied and appropriate tints of Spanish tile, to be duplicated in appearance and improved by material, is an achievement that earns the praise of any one at sight. Numerous examples of the work may be seen in the fine catalogue easily procurable from the Salem office. Among these we mention the splendid results on the Rip Van Winkle, at Buzzard's Bay, Mass.; the Public Library, South Bend, Ind.; the Smedley Library, Redlands, Cal.; the Corcoran Art Gallery, Washington, D. C.; the Public Library, Boston, Mass., and the Library of Congress, Washington, D. C. Many other structures, including fine residences, large commercial buildings, court houses, stations, hotels, schools and office edifices, illustrate the scope of the roof work reached in the employment of sheet metal tile and its accessories. The display of designs by the art of the half-tone is calculated in this large scaled book to give a perfect duplicate of each. Details like tile starting plate, valley pieces under eaves, ridge cresting, eave courses, hip moldings, finials, terminals, gable rolls, enriched ribs, etc., are displayed so clearly that a perfect conception of the patterns, whether marked by relative plainness or extreme depth and boldness, is realized. Many technical points are given in construction and fastening, exposure sizes, adjustment of hips, terminals, rolls, ribs, on expansion, contraction, etc. The Mullins Patent Metallic Roofing Tile is stamped in large sheets, containing from ten to twenty embossed tile in each sheet, thereby reducing the number of joints around the tile and the consequent liability of leakage. This enables a roofer to apply it very rapidly and cheaply, as, instead of handling about two hundred pieces to a square roofing, as in the case of some other metal and all terra cotta tile, it is only necessary to deal with from eight to sixteen pieces in laying a square of the Salem tile. This alone recommends it to the practical roofer. In using the tile roofing an advantage to the architect is the fact that no special roof framing is necessary, as is the case with roofings of heavy materials. The weight of the roofing under notice is about one-sixth of that of terra cotta, thereby admitting of the lightest possible roof framing, and permitting its use on almost any roof where shingles, iron or tin could be employed. The beautiful dark bronze color assumed by copper on exposure to the weather, its remarkable durability, and the fact that it can now be furnished at a very reasonable cost, make it a most desirable material for use in the many different styles of patent tile roofing. To meet various contingencies of trade, etc., however, the company will make Alcazar and Spanish Tile Roofing in zinc and galvanized steel, but none of its other designs in anything but copper and zinc. All the different styles of roofing can be furnished, made to fit any particular tower, cone or bell-shaped roof, and for such roofs, other than square or octagon towers, all tiles are graduated. A little acquaintance with the method of construction and application of the patent Spanish tile roof proves it to be exceedingly simple and secure. It is absolutely storm and water tight, and as expansion and contraction are provided for, is guaranteed, when applied according to directions, to remain perfect and secure for years. The same construction is used in fastening "American," "Columbian," "Newport," "Saratoga," "Atlantic" and "Buzzard's Bay" designs of Mullin's tile. The firm also manufactures other architectural sheet metal work, statuary, stamped steel rowboats and launches.

NOVEMBER
1905

AMERICAN HOMES AND GARDENS

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Vol. I
No. 5

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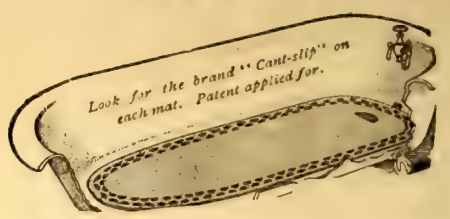

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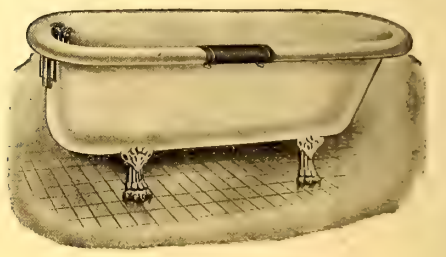

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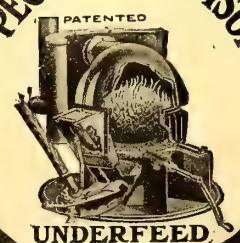

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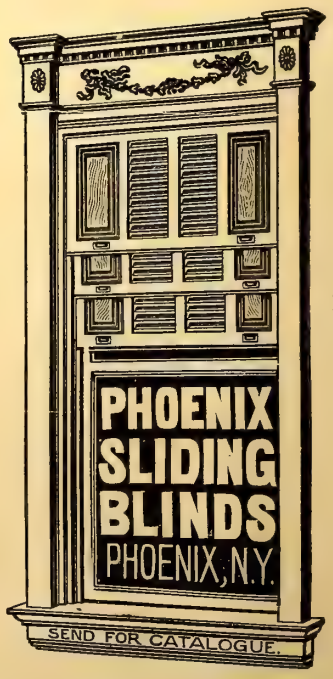

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NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be enclosed for postage if the writers desire the return of their copy.

Photograph by Alman & Co.

The Garden Front and Terrace

The Summer Home of Murry Guggenheim, Esq., Hollywood, New Jersey

AMERICAN HOMES AND GARDENS

Volume I November, 1905 Number 5

The Lake from the Terrace

The Summer Home of Murry Guggenheim, Esq., Hollywood, New Jersey

Monthly Comment

ONE of the popular magazines recently printed a story concerned with the marital relations of a certain couple who had a town house for the winter and a country house for the summer. The tale opens on a very hot day, and the man realizes it was going to be intolerably hot riding the rail for a whole hour to his suburban home; he detested the place anyway, we are told, and so on, with many ungrateful thoughts of his fine country house. The writer of the story is a woman, and no doubt she thought she had touched a particularly masculine note when she got in her fine work anent the man's dislike of commuting. It is possible that commuting has its drawbacks, it is possible that many men dislike it, it is possible that many men fail to see the charm that is inherent in a well-kept-up handsome country estate; but all such notions show a total lack of appreciation of some of the most agreeable things in life. They indicate a total lack of real interest in one's place of abode, without which the most splendid home must pall on one; and they show, further, a singular sense of disproportion. A rightly maintained summer place is a true joy and delight; it can not possibly be had within near-by city limits, and an hour's trip in the train daily is none too far to travel in order to reach it. The gentleman around whom this tale centers may represent a considerable class of the well-to-do community, and if so there are certainly many persons who need to learn what a home is and how to enjoy it.

PHILADELPHIA has interrupted its efforts to purify its politics for a public rejoicement over its proud supremacy as the great "city of homes" of the United States. The distinction is, indeed, a notable one. A local census has disclosed the fact that Philadelphia now has 282,117 dwellings. Before this stupendous figure the further fact that the city has also 6,703 store properties, 805 churches, 297 public school properties, 5,433 manufacturing plants and 135 buildings for the manufacture of malt and spirituous liquors, is of comparatively slight importance. The real significance of this great total is, however, chiefly apparent from a comparison with other communities. On a basis of a population of 1,400,000, Philadelphia has an average of five persons to a dwelling. In New York the proportion is estimated as 20 to a dwelling, in Chicago as 9, in Boston as 8.4, in Fall River as 11. It is a unique distinction and a remarkable result. It brings out afresh the inherent home-loving quality of the Philadelphia citizen. Within the last year 6,848 new homes have been built in Philadelphia, at a total cost of $16,000,000. All these figures are stupendous, and it is not strange that Philadelphia is delighted with its home achievements.

THAT the last few years have seen an increase, and a decided increase, in the cost of building materials, is a matter of common knowledge. It is a movement that has occasioned much alarm, for the upward tendency has been so marked as to seem general; and while this is not literally so, it has extended to so many materials that the contention need not be questioned in a practical discussion. The building and loan associations, in convention assembled, solemnly agreed to petition the Congress of the United States for a reduction or repeal of the tariff on building materials. The New York Sun very quickly rose to point out that the increase to which this convention objected was not caused by any relation of the tariff to the matter or by anything else than the increased wages which are now paid to workers in building materials the country over. The argument is beautiful in its simplicity. The most frequently used materials in house construction are wood, iron (or steel), brick or stone. Not one of these, remarks the Sun, has value in its original state; but they do have value when subjected to treatment by human labor. If, therefore, these articles have increased in price, the reason lies, not in the operation of the tariff, but in the increased cost of the labor put upon them. It was quite to be expected, after this brilliant analysis, that the Sun should calmly request those agitating for lower prices for building materials to begin by reducing their own wages as the only remedy.

THE agitation for childless flats continues to be one of the popular topics of the day as well as one of the most voluminous, although out of the great mass of words that it has produced there has been little developed of real value, and certainly very little which helps toward improving the situation in any respect. Landlords continue to not want children; families with children continue to find it difficult to obtain flats. Both parties are at a standstill and a deadlock, and neither moves an inch. It may, however, be pertinent to inquire if the objection to children has not some real foundation to its intensity. The prevalence of any tradition is regarded, by most historical writers, as affording some grounds for its actuality. The prejudice against children in flats is as widespread as the building of tenements and apartment houses. It is neither charitable nor reasonable to assume that every landlord and every agent is a human monster, intent upon depriving little children of homes simply because they are children. Suppose the children themselves are considered, and some explanation sought in them. One need not be a sociological expert to be aware that many children are utterly untrained, that they generate an amount of noise in direct disproportion to their size, that they seldom know how to behave, that they are rarely watched, corrected and guarded by their parents, that they sum up, embody and personify many acute discomforts. It is true that most of these matters only become urgent after the child is able to go around by itself, and the objection to children by the landlords is quite as marked against very young ones which can not be disciplined as toward those of older growth who might be subjected to training. The explanation may not be a complete one, but it at least raises the hope that with better training of children there may come a more tolerant regard for them. Even good behaved children are not as interesting to other parents as to their own. It seems singular that so patent a fact should not be more widely recognized.

OF the ways of wasting time there is hardly a limit. Many consider it a noble thing to do, and as they might be engaged in mischief instead of simply doing nothing there may be some value to the contention. No organization for the promotion of time-wasting has yet been started, but it will not lack for membership should it once be seriously proposed. All time spent in doing nothing is not wasted, but any time spent in a foolish, unnecessary waste is time lost forever and completely to the individual and to the community. A case in point is the time spent in watching building operations, the removal of a safe, or other work of like nature. One may learn a good deal from watching the construction of a building, but the idle men and boys who surround such work, head turned up, mouth agape, hand in pocket, vacancy in brain—these people gain nothing. They have simply time on their hands, and they use it up in any way.

Notable American Homes

By Barr Ferree

The Summer Home of Murry Guggenheim, Esq., Hollywood, New Jersey

THE charming country which surrounds the neighborhood of Long Branch has long been a favorite site for the building of summer cottages. The older type is a familiar one, and may briefly be described as a wooden structure having infinite variety in shape and in direction. In other words, a building that sprawled on land and attitudinized toward the sky. Very wonderful and strange many of these older cottages are, quite unlike buildings of any other sort, and exhibiting some of the strangest vagaries to which the art of building in America has given manifestation.

But a change is passing over this summer architecture by the sea; perhaps it already has passed and the change be permanent. The stupendous pace set by Newport in this matter could not be without effect, and the time must soon be close at hand when other famous watering places will boast their great palaces, and the sumptuous mansion, which is perhaps regarded as typical of the country, become the typical home of the seashore. Moreover, the older houses, with their strange grotesqueness of inherent oddity, were too absurd to find favor in a period more appreciative of architecture, such as we may hope our own to be, and thus the reaction was bound to come, and buildings of a wholly new class come to be typical of the great house of our seashore resorts.

How far Mr. Murry Guggenheim's beautiful home at Hollywood, N. J., may serve as an example in this respect it is too soon to say, since it was only finished in the spring of the present year. It does not lack neighbors that might have patterned after it, to their own great advantage and that of the entire vicinity. But it would be unfair to extend the comparison further, for no house within sight of it can be compared with it for beauty or for splendor. It is a house that in every way is justly entitled to be called "notable."

The Terrace Porch

The Hall

One does not look for spacious grounds and wide estates at Hollywood. Those of Mr. Guggenheim are ample, both for the house and for the obtaining of effective landscape results. A very short drive from the railroad station brings one to the stately entrance—a simple gate with high piers supporting marble vases. The porte-cochère spans the drive at the center of the house, and is a monumental structure of grand proportions—round-arched beneath an entablature supported by Ionic columns and carrying a segmental entablature. An inner porch serves as an entrance to the house.

Most visitors, of course, will lose no time in hastening within; but we may pause for a moment or two, to note the outward aspect of the house on this side, the entrance front—the front certainly less ornate than the garden front must be and is speedily discovered actually to be. It is very " swell " and distinguished, the great white walls—for the house is built of white stucco throughout—rising in stately simplicity, unmarked by ornament save a cornice between the first and second stories, and again at the summit of the house. It is but two stories high, the central part somewhat extended forward and slightly higher, a normal emphasizing of the center, which is further emphasized by the great porte-cochère applied to it. There is little connection in idea between these two parts—the house and the carriage porch —for the openings of the house are square and rectangular and those of the porch are round. But the motif of the porch appears frequently in the garden front, and hence has proper place here.

Yet, utterly plain, almost severe as this entrance front is, it is penetratingly distinguished. More than any other word that, perhaps, best describes the house. It is not assertive, it demands no attention, it does not seek comment, but it has the distinguished air of the *grande seigneur,* the thorough gentleman who knows how to dress and behave himself, and who conducts his affairs in a thoroughly gentlemanly fashion. It is a characteristic quite as definitely marked in the severe entrance front as in the ornate garden front.

The garden front is one of genuine grandeur. It is the family side of the house, the side overlooking the grounds, the personal and private part of the house. It is truly splendid. The dimensions, everywhere spacious, are here extended in two great semicircular porches, which come forward on each side, and inclose the terrace on which the house is supported. This terrace is approached from the lower grounds by a broad flight of steps.

Beyond the terrace is the house, the center well brought forward and slightly higher than the wings on either side, and itself divided into three parts—a slightly recessed center and two end pavilions. But the difference in wall facing here is quite small, barely sufficient to give room to the colonnade, which, with its cornice, is the chief ornamental feature of this front. The pavilions of this central part have single round-arched windows below and smaller rectangular ones above, corresponding in shape with those in the second story of the central part.

The wings which are applied to each end of this center have their lower story completely hidden behind the great semicircular porches which inclose the terrace on both sides.

The openings are large, round arches, as in the adjoining house wall; arches perfectly plain and without ornament, and standing under an entablature carried on plain Ionic columns.

The ornamental character of this front is derived solely from its architectural parts. That is to say, it depends primarily on the proportions of the house, on the massing of the parts, on their relationship to each other. The ornamental features are architectural features: the applied colonnade in the center, the arcade of the porches, the detail of the cornices. The actual ornament is reduced to a minimum—there is no loss and no sense of loss; yet there is nothing here but the simplest of architectural forms. Were it not for the enormous skill with which this front is composed there could scarce escape a sense of barrenness. The keystones of the three central windows of the lower story, and similar keystones over the square openings at the ends of the arcades are embedded in simple conventional foliage. The keystones of all the other windows in the center are emphasized, but there is no other detail of any description in this front save that of the cornices, the cornices of the arcade, of the central colonnade and of the main roof. All of these are very delicately detailed, and being of the same material and color as the walls, are not unduly prominent.

Of the minor points of interest here, mention should be made of the balustrades and plants. Both are essential to the character of this front. The semicircular porches are surmounted with iron balustrades, inclosures of the same material and pattern being placed below the windows of the second story; a separate inclosure in the ends, a continuous railing in the center. A stucco balustrade surmounts the center of the house. These railings are dark blue black, and constitute the single external note of color in the exterior, save the awnings of white and yellow ocher stripes. Lofty pyramids of bay trees are stood against the house at needed points of emphasis: one on each side of the large window in the pavilion ends, and one again on each side of a flat-topped opening at the end of the arcade. The deep green leaves form an agreeable contrast with the white walls, and enter intimately into the color scheme of the front. The same might be said of the orange trees, planted in square boxes, which are stood on the terrace in a symmetrical manner. Four great marble vases standing on the terrace balustrade and a couple of low marble benches complete the furnishings of the terrace, whose graveled paths surround sections of well grown grass.

So much splendor, of a very simple but highly effective sort, has gone into the making of the exterior of the house that quite the same quality is to be looked for within. Even the more somber entrance front suggests the palatial interior, and one enters it with a mind keyed for sumptuous impressions. The entrance doorway leads immediately into the hall. This is a spacious room, ample enough for a dozen purposes, but apparently used only for exactly what it is, the entrance hall to a great house. It is a long rectangle, with steps at either end leading to a higher level. All across the longer side is a raised platform or corridor, completely cut off from the entrance space, with Roman

The Living-Room

Ionic columns and a pierced balustrade. The floor is of white marble, almost completely covered with a rug of green, white and light brown. A light green carpet is on the steps at the ends, and the walls, ceilings, columns—the whole interior—is white, the needed color being given by growing plants and by the carpets and rugs.

Ascending the steps to the left one reaches the reception-room. This is circular in form. The paneled walls are cream color, the carpet a greenish drab, the curtains white. Directly in face, as one enters, is a mirror let into the paneling, which completely covers the walls. There is no true cornice, but an apparent cornice is obtained by the arrangement of the door heads.

An archway, placed at right angles to the steps leading to the reception-room, gives access to the upper corridor, which extends across the back of the entrance hall. This is the main line of communication between the various parts of the house. The inclosing wall is treated with engaged columns. The central bay, overlooking the lower hall, is a solid wall and perfectly plain. The adjoining bay on each side contains a flat-topped doorway, with glazed panels, opening into the living-room, which occupies the center of the house. The next bays beyond these are immediately facing the passages by which the corridor is entered through the archway that opens above the stairs from the lower hall. Here are round-arched niches, each containing a marble bust on a pedestal. Beyond, to the left, is the billiard-room; to the right is the dining-room. The wing beyond the billiard-room is occupied with rooms for the men servants; the corresponding space on the right side is given up to the kitchen pantries, servants' hall and similar apartments. The disposition of the plan is, therefore, entirely simple and logical. The chief rooms of the house are conveniently arranged, and are entirely separated from the entrance hall. The chief novelty consists in placing the men's rooms on this floor, an arrangement dictated by convenience. There is no third floor in which the servants may be placed, and the space on the first is used to good advantage. At the further end of the entrance hall, in a position corresponding to the reception-room, is the staircase to the upper floor. The floors in this part of the house are all laid with marble covered with green rugs.

The billiard-room is paneled with chestnut stained a rather warm brown nearly to the ceiling, a triglyph design forming the crowning member. Above the wall is decorated with a brown pattern on a gray surface. The fireplace is of white marble embedded in the wooden paneling. The ceiling is plain and undecorated, and the floor is of hardwood, with a brown carpet around the billiard table in the center. The furniture is of brown leather. The room is brilliantly lighted by the great round-arched window at one end, and has its own toilet-room.

The Dining-Room

The living-room adjoins the billiard-room, and may be entered from it or from the glazed doors in the hall. It is paneled throughout with walnut, the cornice which supports the ceiling being carried on paneled pilasters, which form an essential part of the wall decorations. The room is oval in form, the corners being filled with bookcases, with

doors of leaded glass. It is lighted by the three central windows, which form a leading feature of the exterior. Over the mantel is a portrait of Miss Lucille Guggenheim, the daughter of the house, by M. M. Dantzig. It is let into the paneling and forms one of the permanent decorations of the room. The carpet and furniture is of steel-blue. There are two handsome lights pendant from the ceiling, and side brackets applied to the pilasters.

Further on is the dining-room. It is paneled throughout in wood, and is of a most delightful yellow in hue, although, save for the carpet and the cushions of the chairs, there is not a bit of yellow in it. The tone of the walls is, however, exactly right; just sufficiently removed from white not to be white, and yet toned with so much yellow that the white marble of the fireplace stands out clear and brilliant in striking contrast with the tinted woodwork. Like the billiard-room, this is lighted on one end by a round-arched window. On each side of the door into the corridor are built-in porcelain closets, the delicate contents being shaded behind silk curtains. The central light is of gilded bronze, the pendant shades being yellowish in tone. There are four sideboards or console tables in this room, designed in harmony with the general scheme.

From the billiard-room and the dining-room one may enter directly onto the curved porches, to which reference has already been made. Their shape and direction add to their apparent size, which is great in itself. The stucco walls are without ornament, save a simple cornice molded at the ceiling. The floors are of stone mosaic. Toward the terrace, as has been explained, the openings are round arches; on the other side they are rectangular, with trellised framework, inclosing round arches, beneath each of which is a box of brilliantly blooming flowers. It is a thoroughly charming arrangement, an exquisite conceit, well calculated to arouse enthusiasm, exactly as it gives a beautiful individuality to these spaces, and adds immensely to their effect. At the end of each semicircular porch is a large rectangular room, open to the air, lovely places of rest and recreation. The furniture of all these porches consists of caned and ornamental willowware, some in solid colors, some variegated; those of each wing being quite distinct and different in pattern.

Of the kitchen and service rooms it is sufficient to say that they represent the latest models in such rooms. Here the floors are paved with tiles, the halls with mosaic. The kitchen walls are tiled to the ceiling. It is a bright, cheerful apartment, as are all the workrooms. The refrigerator is a vast structure built in, with a tiled wall; it has many compartments. The basement contains the laundry, coal and wine cellars, valet's room, and is otherwise disposed of to advantage. At one end, below the kitchen, is a porch which gives upon the kitchen yard, where supplies are received. Just beyond it is the clothes yard, surrounded with evergreens. A dumb-waiter and a back stairs run from this part of the house, from basement to second story. The rooms over the kitchen and adjoining rooms are set aside for the women servants.

The whole of the second story, with the exception of Mrs.

The Boudoir

Guggenheim's boudoir, is given up to bedrooms and bathrooms. These are arranged en suite. The family rooms are on the garden front; the guest rooms at the end and on the entrance front. The bathrooms are tiled throughout, both floor and walls, and are equipped with porcelain tubs and bowls and nickelplated exposed plumbing of the best type.

The bedrooms are thoroughly charming, very delightfully varied in coloring and in furnishing, giving fine individuality to each room. The scale of colors is very delicate and soft. One large bedroom is paneled throughout with wood painted white. On the floor is a greenish rug; the furniture is green and white, the mantel of blue marble, with a built-in mirror over it.

pink, covered with a plaited netting. A small study adjoins this room and is finished in blue; the furniture is wicker. Another bedroom is green, another mauve; here the wall paper has a delicate diaper, with ribbon borders of mauve top and bottom. Steel-gray, light blue and green again complete the colors used for the decorations of these charming bedrooms. With the exception of the paneled room the decorative system is identical: a wainscot of wood painted white, with the upper walls covered with paper in harmony with the scheme selected. The wall papers are without friezes or borders, except some narrow bands or ribbons which transform whole sides of the room into large panels or otherwise give a moderate note of color. The furniture of each room has been well matched and especially prepared for it. The

The Terrace Overlooking the Garden

Immediately adjoining is Mrs. Guggenheim's boudoir, which occupies the center of the second floor, overlooking the garden. It is an exquisite room, wholly in white, and extraordinarily bright and light. It is circular in form, the triangular corners being included within the room space by doorless openings—an interesting utilization of space otherwise wasted. The walls are paneled throughout with wood and with mirrors. The carpet is fawn color, with a green and red border, the same colors reappearing in the furniture coverings. The central chandelier is a graceful conceit of a basket of flowers.

The next bedroom is pink. The carpet is similar to that on the boudoir floor, as is the furniture also, with the colors a little more pronounced. The walls above the wainscot are

central part of the upper story is filled with a spacious corridor, from which the various rooms open.

Great estates are not characteristic of the summer homes in the vicinity of Long Branch. Mr. Guggenheim's property can not be described as large, yet it is completely ample for his superb house. It is surrounded with streets on three sides, but has been placed rather near the street on which the entrance front abuts, a situation that gives space for considerable garden and lawn on the other side, exactly where it is most wanted, not alone because this is the garden front, but because one side of the house must be more or less exposed, and the exposure here is so retreated behind trees and space that the private parts of the house are still private,

A Bedroom

A Bedroom

notwithstanding the fact that a person standing on the garden terrace can discern the outer roadway beyond the bounding fence.

That the entrance front stands somewhat close to its nearest road has necessitated clever arrangements without, and this has been done in an exceedingly happy way. Immediately beyond the porte-cochère is a fountain playing into a large basin. This is surrounded with a screen consisting of semicircular niches or recesses, each containing a marble Hermes, and evergreens. This screen is continued on each side of the fountain along the full face of the garden front, with a series of latticed arches similarly connected with trees. There is, therefore, a solid screen of greenery here which effectively protects the whole of the entrance driveway from without. Nor does the protection end here; for the space behind the screen is also subjected to formal treatment, with semicircles of evergreens and with grouping of other trees, so that, when fully grown, all this side of the house will be within a double line of trees and vines, absolutely shutting out any hint of the adjoining street. The floral planting here consists chiefly of two immense beds of cannas, salvias, coleuses and other plants arranged in formal patterns. The base of the house wall is planted with evergreens, rhododendrons and other hardy plants.

The garden front is completely dominated, as has been stated, by the splendid architecture of the house. The garden treatment itself, however, is worthy of note. The lake occupies the foreground immediately below the terrace. It is planted with water lilies and other aquatic plants, and is surrounded with trees and foliage and blooming plants, giving charming notes of color to all its border. At each end of the terrace is a special flower garden; on one side it is planted chiefly with annuals and other gaily blooming plants, on the other is a rose garden bordered with annuals in brilliant color. A tennis court is close at hand. And then around and beyond these garden spots are trees, large trees, beautiful trees, trees giving ample shade, yet by no means blocking the view in any direction, although so large is the area and so beautifully fine the trees that one catches but stray glimpses of the outer world. But one does not need to see much without here, for there is so much within, and that within has been made so much of that more than is here seems unnecessary.

No gentleman's country house is complete without its stable. The house grounds of Mr. Guggenheim contain no space for this necessary appendage, and it is, perforce, located across the street in a near-by spot. The stable sets well back from the highway, and the drive down to it is lined, on each side, with a vegetable garden, beautifully planted in squares and rectangular plots separated and surrounded by privet hedges. A very useful end is thus obtained in a quite decorative manner. As for the stable itself, it is needless to add that it is equipped in the most complete manner. The entrance, or washroom, is floored with cement. On one side

The Gateway

is the carriage house, scrupulously clean and a model of neatness; on the other is the stable, with stalls and box stalls, the wainscot of wood, the walls tiled above, the whole in the finest possible order. The harness-room competes with the other parts for nicety of arrangement, and there are sleeping-rooms for the men on the ground floor. An automobile garage is a separate building, behind the stable.

If one leaves this house with regret, one has at least the comforting thought that while it stands one may visit it again, and that, in the meanwhile, it will remain as an object lesson in the art of fine house building. That this lesson is needed to be taught in its immediate vicinity perhaps as much as elsewhere is an added good fortune to its clever architects, Messrs. Carrère and Hastings. Here they have fully demonstrated their ability to teach this lesson, as well as expressed, in a very fine way, their complete mastery of the whole art of domestic architecture.

The Guggenheim house stands in a group of houses designed by these architects, all very recent and all characterized by certain points of similarity.

Readers of these papers will recall the house of Mr. Herman B. Duryea, at Westbury, L. I., and that of Mrs. Richard Gambrill, of Newport, as houses of somewhat the same type. The resemblance is typical rather than actual, for they are quite unlike. But they have these points in common: they are built of white stucco; the ornamental detail is restricted to the architectural parts and is thoroughly restrained; the open porch or loggia is developed in all of them, and the use of lattice work, either at the windows or as screens, is common to all. These, however, are quite superficial matters compared with the real distinction, the quite evident command of architectural parts, the definite expression of architectural ability with which all these houses are endowed. They are wonderfully pleasing and fine. How much they may have cost I have no idea, but they have every evidence of being costly houses, and that without the ostentatious display that characterizes so many high-priced dwellings.

I have already stated that Mr. Guggenheim's house is extraordinarily fine and splendid. The words "swell," "bully," and other adjectives, technical, semitechnical, slangy and otherwise, rise rapidly to the mind. A mere single superlative word seems hardly sufficient, but at least any well assorted group of superlatives may answer. It is a house thoroughly distinguished in character both without and within. Inwardly the prevailing impression is one of great size and coolness. The ceilings of the first floor are of unusual height; if those of the second are less lofty, it is chiefly through comparison with the higher ceilings of the floor below. As is fitting in a house intended exclusively for summer use the interior is cool and airy; the lofty ceilings, the stately dimensions, the white walls, the cool coloring, all help in this admirable effect. The prevailing note of the whole interior is white; only two rooms, the billiard-room and the living-room, being exceptions, with walls of paneled dark wood. There are no colored curtains at the windows, but shades and curtains of white. The colors of the carpets, of the furniture and of the wall papers in the second floor are of the softest tints imaginable; positive enough to give an individual note to each room, but actually so soft and gracious that one scarcely notes their presence, although instinctively aware of it.

The End of the Home

DR. GOLDWIN SMITH strikes a note of needed warning, melancholy in its truth, in a recent paper on "The Passing of the Household." This, as he very truly points out, is due to the dearth of domestic servants, a circumstance becoming as well marked in England as it has long since been in America. The hold of the English people of the best class on their servants of the best class has been due chiefly to the profound sense of fealty on the part of the servants to the families of their masters. This condition has never existed in America to any extent save in the South, where great slave owners often assumed a paternal aspect toward their retinues of servants. The North offered little opportunity for this; properties were smaller, the number of servants less, the feeling toward their employers that of employed persons and not as subordinates having a life interest in the home or the affairs of those with whom they lived.

Is home life, therefore, dependent upon the servants? It would seem that, to a considerable extent, this is true. No home can exist unless work is done within it, and few modern homes—certainly none in the cities and near-by suburban regions—are conducted on the basis that the daily home work is performed by the members of the family. Nor should this be expected. The manual work of the household does not call for skilled labor as it is understood in the trades. A well educated person can find better occupation for her hands and mind than that necessary to the comfort of the household, important as the latter may be. And this, of course, immediately discloses the secret of the whole matter. If an educated person need not do housework, why not become educated and thus escape it also? Hence the rush to the schools, hence the multitude of half educated persons, unfit for any occupation that calls for education, thronging the places which should only be opened to the educated. This condition greatly widens the discontent with domestic work, which is looked upon as inferior, and the chief prop of the home is removed, almost without warning and certainly in a very uncomfortable manner.

The problem is a difficult one, because the present position is one toward which we have long been drifting without being aware of the ultimate end. Even had the logical conclusion been foreseen it would have been ignored as a bridge to be crossed when we reached it. The present outlook seems to suggest that we have reached the bridge and stand on an isolated abyss, nothing beyond, and absolutely nothing behind which can be availed of in present necessities.

But the difficulty is not alone due to indifference toward the future. It is due, quite as much as anything, to the desire for independence and personal freedom, which is the most marked American characteristic. Girls who formerly went into domestic service now throng the shops and factories, working for wages which, in the end, amount to less than they would receive for domestic work, and living in homes far less comfortable than those enjoyed by the house servants. This is so decided a tendency of modern life that the sociological observer is wholly without basis for suggesting change and betterment. But obviously the home life, in so far as it has rested on servants, requires to be adjusted to new conditions that can not be ignored.

The Studio of John P. Cuyler, Esq.

Princeton, New Jersey

ONE of the most interesting types of the modern combination house, "house and studio," is the one which is illustrated herewith, and which was built for John P. Cuyler, Esq., at Princeton, N. J. The house is placed at an angle from the road in order to obtain a direct north light for the studio, which occupies the main part of the north side of the house.

It is constructed of stone, and the exterior is covered with stucco; the latter is given one good coat of government whitewash, presenting a fine white stone, and is in excellent harmony with the gables, eaves and blinds, which are painted a bottle-green. The roof is covered with shingles and treated natural. The porch, which extends across the front of the house, has octagon posts, painted white.

The entrance is into a vestibule hall, which is treated with ivory-white paint, and has an open fireplace with red brick facings and hearth, and a quaint little mantel of Colonial style. Beyond this hall is the reception-room, which is treated in a similar manner and furnished with a similar fireplace.

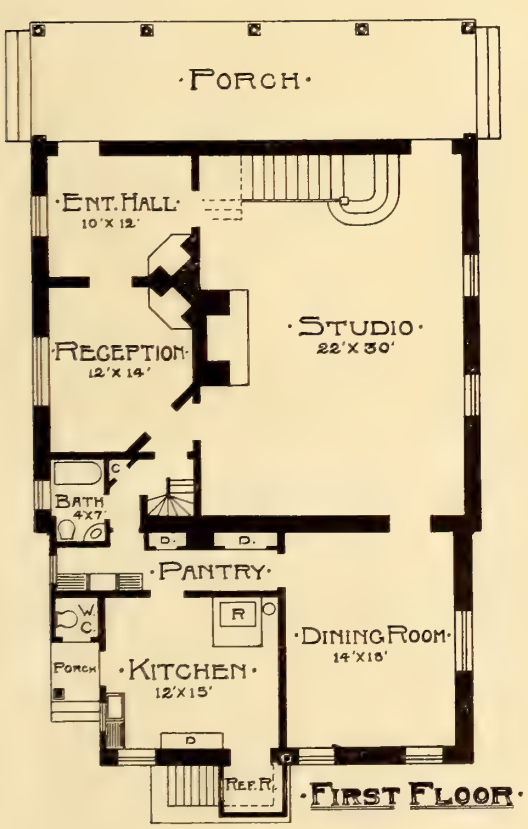
To the left of the entrance is the studio, of large dimensions and rising up into the roof of the second story. It is trimmed with pine and treated with a walnut stain with a glazed finish. The walls have a wainscoting, above which the walls, of rough cast, are treated with water colors in a grayish-green tone with harmonious effect. A large open fireplace built of brick, with the facings of the same, and a large stone shelf, supported on brick corbel brackets, is quite the feature of the room. The stairway to the second story rises out of this room. The dining-room, which opens from the studio, is also trimmed with pine and treated with walnut in a glazed finish. It has a wainscoting and a wood cornice. The kitchen and its dependencies are quite complete.

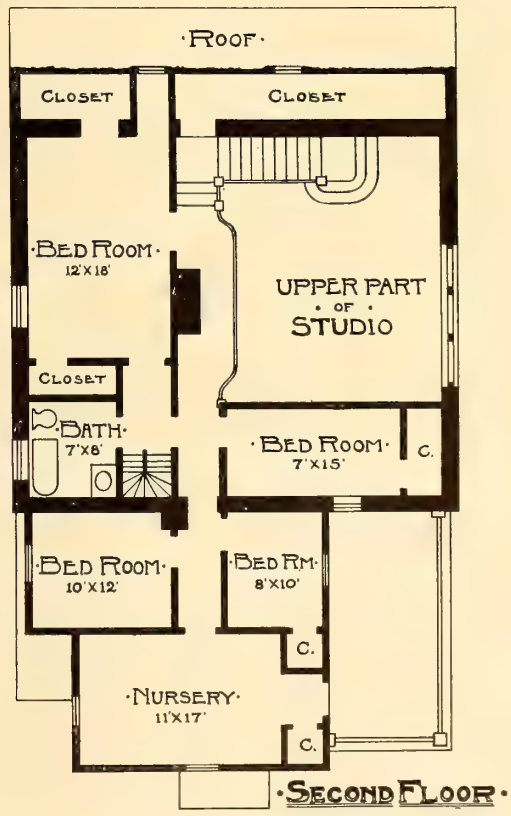
The House

The second floor is also trimmed with pine, and the whole treated with ivory-white paint. The rooms are reached from the staircase and the balcony, which extends along one side of the studio on the level of the second floor. This floor contains four bedrooms, nursery and a bathroom.

Messrs. Baker & Dallett, architects, 1420 Chestnut Street, Philadelphia, Pa.

Another View of the House





The Studio of John P. Cuyler, Esq., Princeton, New Jersey

"The Needles," the Country House of Mrs. B. P. Cheney

Peterboro, New Hampshire

"THE NEEDLES," the country house of Mrs. B. P. Cheney, at Peterboro, N. H., is designed with great care and with a very close study of its detailed parts. The underpinning, terrace walls and the stone piers are built of Milford granite. The terrace floor is paved with brick laid in herring-bone pattern. The first story is covered with clapboards and painted a reddish brown color, and the second story is covered with shingles of red cedar, and treated natural with a buttermilk finish. The trimmings are painted ivory-white. The roof is covered with shingles and finished with red stain.

The entrance is under the front gable, which is in the form of an overhang resting on Colonial columns. The front door is of mahogany, on either side of which are small windows glazed with leaded glass. The plans show a central hall, which is trimmed with quartered oak. It has a paneled wainscoting, wooden cornice and a staircase of handsome design, with hand-cut balusters, newel and rail. From the first landing of the staircase a small bay is thrown out into the library, which is glazed with bull's-eye glass, and forms a very attractive feature.

The library is a handsome room, trimmed with quartered oak. It has bookcases built in and a paneled wainscoting. The ingle-nook contains an open fireplace built of brick, with facings and hearth of Vert Mawrine marble, and a mantel of handsome design. On either side of the fireplace are paneled seats, over which are clusters of small windows glazed with plate glass. The mullions are very small and narrow, so as not to obstruct the view.

The dining-room is trimmed with quartered oak. It has a paneled wainscoting to the height of seven feet, above which the walls are covered with crimson burlap and the whole finished with a wooden cornice. The open fireplace has facings and a hearth of Siena marble, and a mantel handsomely carved and provided with a paneled overmantel. The kitchen, laundry, pantry and store closet are fitted with all the best modern conveniences, and each are trimmed with rift hard pine, oiled and varnished.

The second story is trimmed with pine and treated with

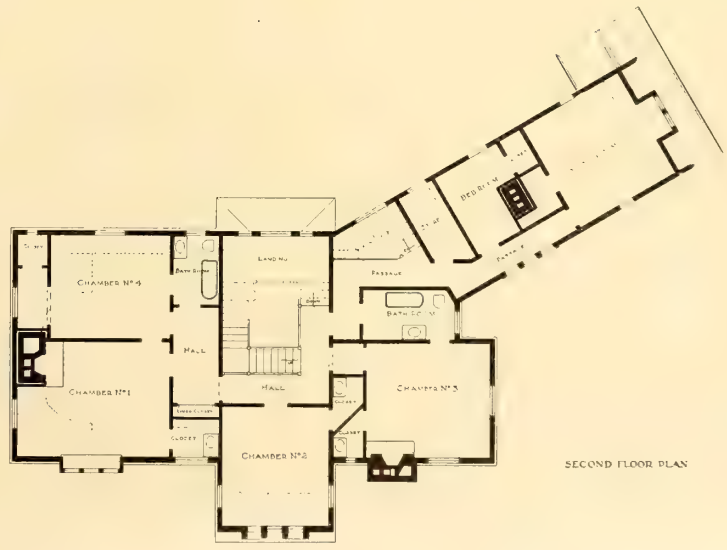
The House

"The Needles"—Another View of the House

white enamel, and doors of mahogany. There are four bedrooms and two bathrooms, besides a store closet, maid's room and music-room on the extension over the kitchen. Each room not connecting with a bathroom has a private lavatory. The two bedrooms on the front have open fireplaces, with facings and a hearth of African Antique marble, and mantels. The bathrooms are trimmed with mahogany.

The third floor contains several guests' rooms and ample storage. A cemented cellar contains two furnaces, fuel room, cold storage, etc. An annex near the house contains a billiard-room, bachelor's quarters and the servants' bedrooms and bath.

Mr. John A. Fox, architect, 120 Tremont Street, Boston, Mass.



"The Needles"—The Staircase and Reception Hall

"The Needles"—The Library

"The Needles"—The Dining-Room

Glass for Building and Paving

THE manufacture of bricks of glass for building and paving purposes is one of the newest of European industries. The bricks are made by patented processes, and their use, as yet, has been somewhat limited. The indications are, however, that a new and important industry has been opened up, and a new material obtained which is probably destined to have great usefulness. The most notable results have been achieved under the Garchey patents, in which an artificial stone is made from glass.

It is manufactured in a variety of forms for paving streets, sidewalks and gutters, and for the uses for which porcelain and other tiles are employed, as tiling the walls and floors of bathrooms, operating-rooms in hospitals, waiting-rooms and staircases of railroad stations, etc. As the stone has the chemical and physical qualities of glass it is not readily attacked by chemical products, so that it can be used in factories and laboratories where acids and other chemicals are employed, and being impermeable to moisture can be used in cellars and other places where there is much humidity. The stone is also molded in ornamental forms and can be made according to the drawings of architects and interior designers for decorative purposes in drawing-rooms, offices, etc. Owing to its cost, in comparison with other materials, this stone has not yet been used in the construction of buildings.

Tiles of the same material have also been used for walls and floors. Owing to their extreme hardness these tiles are not easy to cut, so it is difficult to place them in position or to redress them when they are worn. The smooth tiles become slippery, but with those that are roughened satisfactory results have been obtained. As these tiles can neither be cut nor drilled, except with great difficulty, it is not easy to hang pictures or advertisements. For the staircases it has been found that the tiles become polished rapidly, which makes them slippery when wet.

Up to the present time the paving, without having given bad results, does not appear to be wearing as well as that made of natural stone. It has been noticed that alongside of the car tracks the paving shows signs of deterioration. It is somewhat expensive to keep the streets in good repair. The thinness of the bricks renders them fragile, and being laid directly on a foundation of concrete they are more liable to break, while their sonorousness is increased. It has been suggested that, if the bricks were four inches thick and laid like the natural stone blocks on a foundation of sand, they would have given much better results. At the present time the city of Paris has no intention of substituting artificial paving blocks of glass for those made of natural stone.

"Craigston," the House of T. C. Hollander, Esq.

Wenham, Massachusetts

A PLEASANT drive through a hilly country and past many fine estates forms the approach to Mr. T. C. Hollander's house, at Wenham, Mass. It is placed on the summit of a high hill, which affords magnificent outlooks for many miles around. Wonderful views, indeed, can be had from every part of this house, each hilltop bearing a notable estate or a rare old farmhouse whose picturesque qualities have been heightened with age. Most of the land immediately around Mr. Hollander's house has been left in its natural state, uncultivated so far as modern art might change it, but still bearing a plentiful foliage of native grass and wild flowers. A spacious terrace has been cleared before the house, and beautifully planted with shrubs and flowers; a true garden spot set among wild surroundings.

The house is a long, low, rambling structure, rough-cast, with exposed timbers; very varied as to heights and roofs, quite unsymmetrical in the disposition of its parts, yet full of a character and charm that pervade and harmonize the whole and render it a very interesting bit of design. It is, in point of fact, a group of buildings homogeneously joined together in a single structure, each part with a distinct purpose and having an individual form. The residence portion of the house occupies the center of the group. It is two stories in height, with two baywindows as its leading feature;

"Craigston"—The Entrance Front

"Craigston"—The Dining-Room

"Craigston"—The Living-Room

"Craigston"—The Pergola

"Craigston"—The Porch

"Craigston"—The Terrace Front

"Craigston"—The Music-Room

"Craigston"—The Stair-Hall

a high pointed roof with a gable surmounting one bay-window, and a dormer the other. To the left is the music-room, which has a wing to itself; and on the right are the servants' quarters, with the stable on the far end. The entrance front, therefore, is composed of various elements, each with its own particular use, and to this fact it owes its wide extent and undeniable interest.

The house is entered through the great hall, which fills the center from front to front, and opens at the further end onto the terrace at the back. It has a beamed ceiling and a paneled wainscoting. The woodwork is painted white, and the mantel, of brick, is of Colonial design. On the right is a smaller hall, containing the stairs, which is paneled throughout with French walnut, with built-in bookcases. This pleasant, cheerful little room serves also as the library of the house.

Behind it is the dining-room, with a spreading baywindow at the further end. The woodwork, which includes a paneled wainscoting, is painted white. The chimney-piece is built diagonally across one corner, and has a paneled overmantel; in the corresponding corner is a built-in china closet. The walls above the wainscot are blue, and blue curtains and a blue rug complete the color scheme.

On the opposite side of the hall the front of the house has a beautiful little reception-room or sun parlor, brilliantly lighted with windows which fill much of its outer walls. Behind it is the billiard-room, which is finished in oak. The paneled wainscoting is tinted a very dark green; the walls above are painted in a green and white lactice design. There is a brick fireplace, and the sash curtains are of green silk.

The music-room is beyond, and fills a wing of its own. It is a large room, especially built for the immense pipe organ, which is its principal contents. The open, beamed roof is in oak, as is the rest of the woodwork. There is a high paneled wainscot; the upper walls are left in rough plaster of a yellow tint. The fireplace is of Caen stone, and the windows of leaded glass.

The grounds around the house are well equipped for outdoor sports. There are tennis courts, tracks for hurdle racing, and other provisions for delighting the sportsman and providing for his entertainment. The estate is singularly complete in these matters.

The House of Daniel F. Ginna, Esq.

Plainfield, New Jersey

THE house built for Daniel F. Ginna, Esq., at Plainfield, N. J., is designed and carried out in a simple type of the New England Colonial architecture of the Georgian period, and its tall, stately columns and portico at the front form the principal characteristic of this particular style. The entire outside is covered with clapboards and painted white. The roof, covered with metal, is painted red. The blinds are painted green. The red brick which is used for the underpinning is also used in the chimneys, and both are laid in red mortar. The front of the house is supplanted by a grassed terrace, and the building has a very pleasing setting among a clump of pines and poplars.

The house has been designed and planned, in every sense of the word, as a home; the arrangement of the rooms shows this conclusively, for they are large and commodious, and yet perfectly simple and dignified in their treatment and form. The family and private piazza at the side of the house is so designed and located as to afford ample shelter from the sun, and at the same time be swept by the prevailing breezes. At the other side of the house, and as a necessary adjunct, is the porte-cochère, while at the front there is a portico and entrance to the main hall. This hall forms a very interesting entrée to the entire general scheme, for, upon entering, a vista is obtained of all the principal rooms of the first floor. Is is of considerable length, and in order to break its elongated effect massive beams have been placed in the ceiling at certain distances apart, and the whole supported on Colonial columns and pilasters, forming a colonnaded effect.

The typical Colonial staircase built in at the end of the hall, and rising from either side to a broad platform, is the principal feature of the hall. The risers, treads and balusters are painted white, and the rail, of mahogany, sweeps down over the newel post, which is formed of a cluster of balusters. Underneath the landing there is an open fireplace, built with pressed brick facings, tiled hearth and a mantel-shelf.

To the right of the entrance is the reception-room, which is treated in the Empire style, pink, green and white in color, the walls being paneled with silk.

The library is treated with white enamel paint, and the walls are covered with a soft green texture. The fireplace has a green tile facing and hearth, and a mantel. The billiard-room, which is placed beyond the library, is trimmed with cypress, and is treated with stain in the forest-green effect. It has an open fireplace, built of field stone, with facings of the same, and surmounted by a massive stone shelf. The den at the rear of the library is finished in a Flemish brown, and it has a lavatory and an open fireplace.

The dining-room, which is placed on the opposite side of the house, is treated in white, while the walls are covered

The Living-Room

The Dining-Room

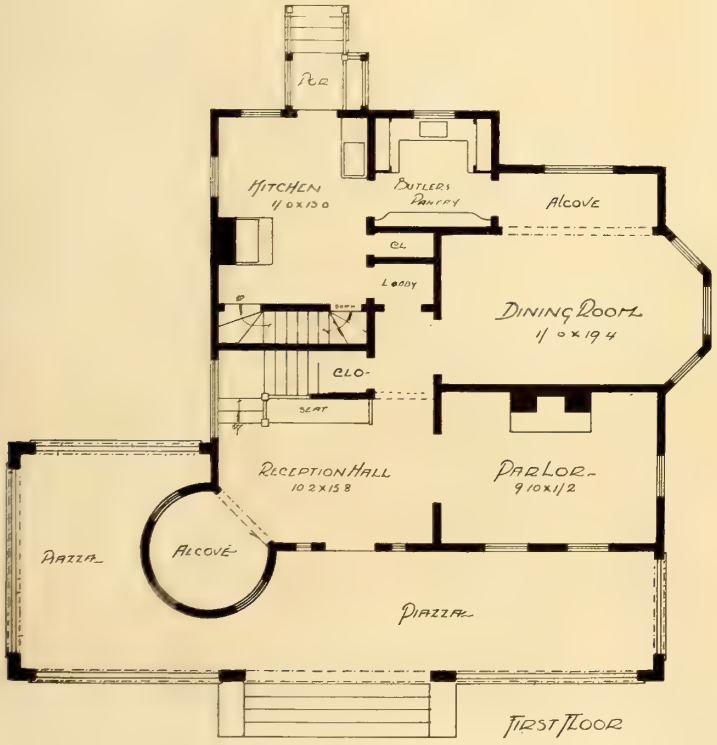
The Stair-Hall

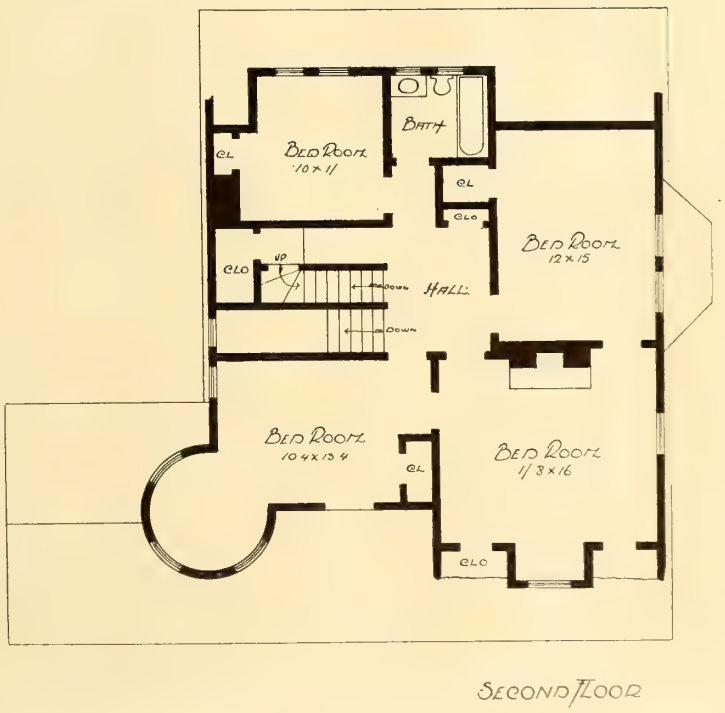
The House of Daniel F. Ginna, Esq., Plainfield, New Jersey

with Japanese leather. This room is oval in form, and it makes a very attractive apartment. The fireplace has tiled facings and hearth and mantel. The butler's pantry is fitted with dressers, drawers, cupboards, sink, etc. The kitchen is fitted with a pantry, which is quite unusual for the modern house, and contains the ice-box, which has an outside entrance. The kitchen has an open fireplace, pot closet, sink and counter, and is fitted with all the best modern conveniences.

The second floor throughout is trimmed with pine and treated with white enamel paint, while the doors are finished in mahogany. This floor contains a large, open hall, the front of which is devoted to a sitting-room, and five bedrooms with large closets, and three bathrooms, the latter having tiled floors and wainscoting, and porcelain fixtures and exposed nickelplated plumbing. There is also on this floor a linen closet of large dimensions, well fitted with shelves and drawers, and a cedar closet. The third floor contains the servant quarters and bath and trunk rooms. A cemented cellar contains the laundry, the heating apparatus, fuel rooms, cold storage, etc.

Messrs. Tracy & Swartwout, architects, 244 Fifth Avenue, New York, N. Y.





The House of Daniel F. Ginna, Esq., Plainfield, New Jersey

Helps to Home Building

Color

COLOR is the vitalizing element in the designing of the house. Its purpose is distinctly to beautify. Intended primarily as an adornment, it is so essential to good architecture that it is quite indispensable. Its utilitarian value is so great that even bad houses well colored take on a new note of freshness and life, and assume an air of good looks to which, structurally, they are not in the least entitled. But color has a nobler value than to cover up the defects of construction, and has a distinction and charm of its own, without which no house is complete.

The elemental purpose of color is to decorate; that is to say, to give a more agreeable aspect to a structure than the materials themselves may possess. Intended as a source of beauty, it is axiomatic that it itself be beautiful. It must be completely adapted to its environment, it must be well applied, and must be so applied that the material, the room and building are all helped.

That color has a distinctly structural value is apparent from the fact that all materials have color, which is an inherent individual quality pertaining to each substance. This color may be good or bad, pleasing or indifferent, positive or neutral, but it exists; and even neutral tones assume positive values when the mass is great enough. How important the value of structural color is will be apparent on viewing a row of houses of identical design but of materials of different colors. It is true the lessons of contrast in such an example are likely to be very pronounced and perhaps even unpleasant; but this quality once divorced from consideration, it will be easily possible for the mind to note how the various colors affect the design, and how very different the design, as a design, appears in the different shades.

Structural color is, in fact, the foundation of all good color design. It is a quality that impresses the mind before the architectural details are grasped, although mass—outline, silhouette—is first comprehended. It is true the casual observer may not take away from the outward examination of a building any definite idea of its color, but he will remember that the color impressed him, impressed him more, very likely, than the arrangement of the door and window openings, of which he will not be able to give a more succinct account.

Structural color, as an element of the design of a house, is very much more considered to-day than a few years since. In fact, houses and buildings of all sorts are so varied in color that it may be questioned if we do not have too much of it. Since color is an inherent quality of every building material, it is obvious that color we must have, of some kind or another. It is quite unavoidable, and the question becomes, not what color shall we have, but how good shall our color be?

The excellence of color is the basis on which it must be judged. It is true one can not avoid color in one's house, but this is no reason for employing color promiscuously or without regard to its own inherent excellence. Color must be good or the building will be irretrievably ruined. If the bricks are of unpleasant shade they should be rejected. If the stone has an unwholesome aspect it must be cast to one side. It is fundamental that the color be good in itself.

The value of structural color is as notable within the house as without it. Wood is the natural internal decorative finish. Many large and splendid houses are now built with marble halls and stone vestibules; these are exceptional residences for exceptional persons. But they are not above the fundamental laws of good building—and as a matter of fact many of these sumptuous dwellings are fine examples of the best domestic work of the time—and the costly stone is introduced partly because of the splendor of the material and partly because of the color it gives. The average home contains nothing of this, and most happily; for stone and marble are thoroughly unsuited to interior work in northern America, being essentially cold to the touch and cold in effect.

That we are learning more and more every day the value of structural color is apparent from the great increase in the use of natural woods. Most of us can recall the time when every inch of internal woodwork was painted—not, it is well to note, from love of paint, but because an inferior wood was in general use which only lent itself to interior effects when given an agreeable color by paint. To-day, however, the natural wood is in higher favor, and very beautiful much of it is, with deep, rich natural colors, fine veinings, smooth even surfaces, to which the art of the wood finisher gives a brilliancy which is the more welcome because it is thoroughly natural. One has a wide range of choice in choosing from these beautiful natural materials, each with its own lovely color, so penetrating in its tones, even in the most subdued of woods, as to be the foundation note of the color scheme of the room, the indispensable tone, in fact, with which everything else must harmonize.

Painted color has many of the qualities of structural color, although, having no structural properties of its own, it is sometimes thought to be beyond the more rigid rules which surround the use of structural color. Paint is so readily applied, and is so comparatively cheap and so easily changed, that it is sometimes viewed as scarcely more than a temporary expedient, to be changed at will and employed with a quite haphazard regard to effect. One can not, of course, entertain the same regard for paint that one does for structure. A painted wall does not command the respect that a wall of stone or of finely finished brick invariably demands. But the painted color will help the house quite as much as structural color, and it will hurt it, too, if it is not well chosen, carefully selected, suitably harmonized. And this is as true of paint within doors as of paint on the exterior. One can not ignore the color problems of the house, whether the color be structural or applied. The universal rule is, that it be good.

No feature of the house interior is more important than the color. This is obtained from quite a variety of sources; from the woodwork, from the walls, from the hangings, from the floor coverings, from the furniture, from the ornaments. Everything inside the house has color, exactly as every sort of material has color. The interior problem is really much more complicated than the exterior, for the inside of the house contains many rooms, each of which may or may not have its own individual note of color, but each of which must be harmonized one with the other, so that a view through several rooms will show no discordant note, but only beauty and harmony.

In many respects the most serious problem that the home maker has to solve is to obtain just this harmony and beauty, without which his utmost efforts will be as naught. It is, in short, the problem of the house, and it is the more difficult because each interior calls for individual treatment.

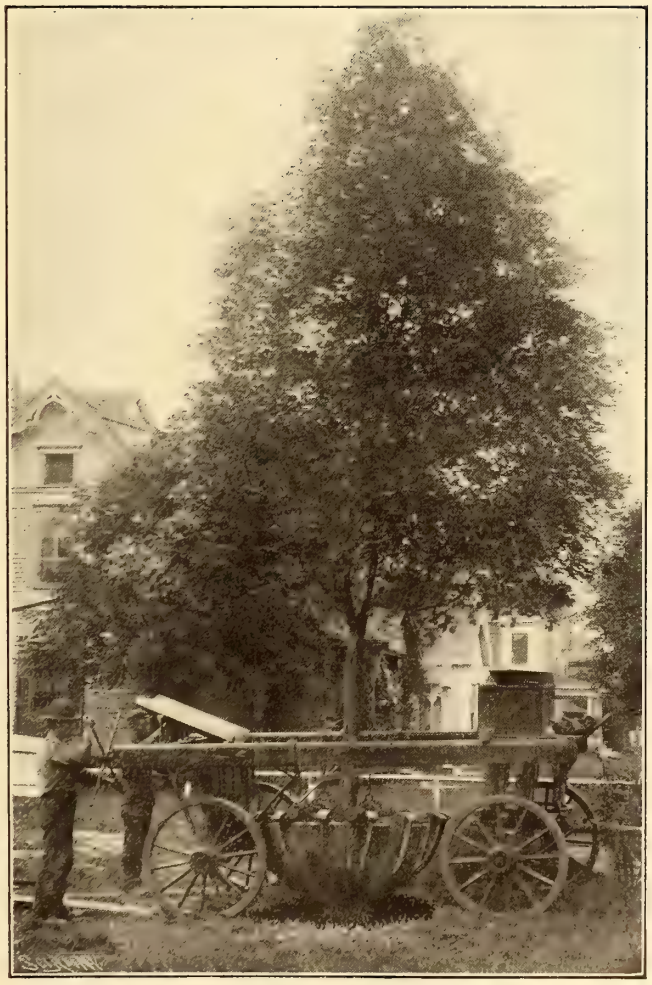
The Transplanting of Growing Trees

By Charles Day

IT is no longer necessary to wait ten or fifteen years until shade trees attain a height sufficiently majestic to become an ornament to an estate. The modern landscape architect all but furnishes the surroundings of a country seat to order. Indeed, he even proceeds with his work while the house is still in course of construction. Long Island, in particular, can offer fine specimens of forest growth ranging from twenty-five to fifty years, including such trees as silver maple, Norway maple, beech, birch, linden, fir, hemlock and cherry. And yet few of these trees originally grew where they may now be seen. In order to hasten nature's processes, the landscape gardener employs a mechanical contrivance that uproots a tree, carrying it, with much of its primeval earth, to the spot which it is to adorn. Apparently it would seem impossible to transplant a tree fifty feet in height with a trunk varying from one to two and one-half or three feet in diameter at the base. Such a tree must have a system of roots so extensive and so ramified that transplanting, if not difficult, would seem to be at least fatal to the life of the tree. And yet trees of this magnitude are easily transplanted.

Driving in the Blades

Several types of tree transplanters have been used of late years with marked success. The tree mover which Mr. Henry Hicks invented has proved very efficient. In operating with this apparatus, the tree, if of fourteen to twenty-six inches in diameter at the trunk, is dug by starting a circular trench of a diameter of thirty to forty feet. An undercut is made beneath the roots with a light prospecting pick. The soil is thereupon picked out and down with a fork or a picking rod, the points of which are rounded to avoid cutting the roots. The loose dirt is shoveled out of the bottom of the trench; the roots are uncovered, tied in bundles with lath yarn, and bent up out of the way of the diggers. If the roots are exposed even for a day in dry weather, the bundles are wrapped in clay, mud, damp moss and straw, or burlap. When the digging has progressed within from four to eight feet of the center, the tree is slightly tipped over to loosen the central ball, which cleaves from the subsoil near the extremities of the downward roots. On sand or hard-pan subsoil this is at a depth of two to five feet. In deep soil it may be necessary to cut some downward roots. A ball of earth is left in the center from five to twelve feet in diameter, which is a load about as heavy as a team of four to eight horses can draw. This ball is not essential with deciduous trees, but it is easier to lift it than to remove it. If the tree be fine rooted, like the red maple, it is difficult to pick out the soil. Coarse rooted trees, on the other hand, such as the beech, soon lose their ball because the earth in which they grow is gravelly.



The Tree on the Wagon

In loading a tree for removal, the cradle of the mover, which is pivoted above or back of the axle, is swung over to the tree, the trunk first being wrapped with cushions and slats. The tree is then clamped to the cradle by chains and screws without injuring the bark. By means of a nine-foot screw operated by a ratchet lever, or hand-brake wheel, the cradle lifts the tree from the hole and swings it over to a horizontal position. Pulling in the same direction by tackle fastened in the top of the tree aids the work of the screw. After the tree is loaded, the roots on the other side of the axle are tied up to the perches. The front wheels are on pivots, for which reason the roots are not broken by the swinging of the axle. Next the roots are drawn aside to put in the pole and driver's seat. Planks are placed under the wheels and the mover is pulled out of the hole by tackle. The hole to receive the tree is prepared with a layer of soft mud in the bottom, which partly fills the crevices between the roots as the tree is lowered into it. The weight of the tree is not allowed to rest upon and crush the downward roots, but is supported by the mover until the fine earth is packed in. The soil is worked down between the center roots in the form of mud by means of a stream of water and packing sticks. The side

roots are next unwrapped and covered at their natural depth. While the tree is horizontal it is usually pruned, the outside being trimmed one to three feet to the crotch or bud, and the remaining twigs thinned out about one-third. Hardwood trees and trees with few roots need no severe pruning.

Until it is firmly embedded, the tree is securely held by guy wires. Anchor posts are set slanting four and one-half feet in the ground with a crosspiece just below the surface. Two to six strands of galvanized steel wire are used, running from the posts through pieces of hose around the tree and back to the post. The wire is twisted tight about two sticks turning in the same direction and moving toward each other. To prevent the sun from drying out the bark on the south side of the tree, the trunk is wrapped with straw. By following the plan described enough of the small roots of the tree are preserved to furnish ample nourishment. Only five or six men are required to remove and set the largest tree by Mr. Hicks' method, and the work can be accomplished in a comparatively short time.

Roots with Thirty-Five Foot Spread Being Transplanted after Being Tied to Branches

An Iowa inventor has invented a machine which, although primarily intended for lifting rocks and boulders, has also been found equally useful for raising and transplanting large trees. The frame of this machine is V-shaped, the rear wheels of which support the outer ends of the frame, while the apex rests on the front truck. Thus it is possible to back the machine up to a tree so that the two arms of the frame will straddle the trunk. When the machine has been backed sufficiently to bring the hoisting drum into contact with the trunk, the front truck is swung around at right angles to the rear wheels so as to provide a firm anchorage. The horses are now detached from the machine and are hitched to the hoisting gear. A connecting rod is fastened across the extremity of the V-shaped frame and serves the purpose of supporting the trunk when the tree is drawn out of the ground. A padded roller on this connection serves to prevent injury to the trunk. A chain is now placed around the roots of the tree, which roots have been previously cut loose from the surrounding earth. The chain is attached to the frame, and the tree is slowly drawn up until the roots clear the ground. At the same time the trunk gradually sinks back until it is supported by the padded roller. The power raising the tree is supplied by the team. A large hole has been left in the space which the roots of the tree occupy, a hole probably larger than can be safely straddled by the rear wheels. It is interesting, therefore, to note the novel method by which the machine is moved away from this cavity. Instead of being pulled directly forward, the front wheels of the machine are first settled around the hole as a center until the machine occupies a position approximately at right angles to its original position, when, the hole having been cleared, the tree can be transported to any locality. The frame of this tree lifter has a direct lifting capacity of over 50,000 pounds.

Mr. John A. Wilkins, of Indianapolis, employs a method radically different from those to which reference has already been made. In utilizing it the trees are transported from bed to bed in midsummer, in preference to the spring or fall, the seasons usually chosen. Mr. Wilkins argues that because the tree is in its most flourishing condition during the summer, it is then best adapted for transplanting, there being less danger of checking its growth or injuring it in other ways. Mr. Wilkins' plan is quite similar to that employed by florists in transferring potted plants, especial care being taken to avoid disturbing the earth immediately around the roots of the tree, as well as to avoid injury to the smaller roots and tendrils. The tree is never handled in any other way than from its base. To explain the method in a nutshell, the earth and dirt are encased in a steel basket of any desired size, which corresponds with the flower pot of the florist. The first operation, in transplanting a tree by this method, is to wet the earth about the tree thoroughly so as to soften the ground. Next comes the placing in position of the steel basket, which is made of steel shovels. A medium sized machine inclosing earth and roots six feet in diameter is composed of fourteen shovels made of 5-16 inch pole steel, each of the shovels being hinged to a steel platform surrounding the tree. After the shovels have all been driven into place they are firmly secured to the plat-

Lowering the Tree into Hole after Pole and Seat are Removed

A Powerful Machine for Moving Rocks and Large Trees

form by cross bars, by which the whole tree can be lifted from its bed. The hoisting apparatus is then adjusted to the trunk, and two men lift the tree out of the ground by screw power, raising it to its position in the transporter. The men have complete control of the machine at all times. After the tree has been removed from its old abiding place, it is laid back on the cushion of the skeleton wagon which is to convey it to its new location, and it is thus transported through the streets of the city. The angle is so chosen that the branches pass under telegraph and telephone wires, and other overhead obstructions. Incidentally it may be noted that the tree rests so lightly upon the cushion that there is no strain whatever on the trunk. Upon arriving at its destination, the tree is slowly lowered into the hole which has been prepared for it, and after the transporter has been removed the earth is filled and tamped about the basket. When all is secure the shovels are withdrawn, leaving the tree fully embedded, without a loss of any of its original surrounding earth, and taking its fibers or hard roots. It is possible eventually to plant the tree exactly in the same position in which it originally stood. Two men can handle a tree ranging from thirty to forty feet in height without difficulty. Maples, elms and other shade species having trunks ranging from five to seven inches in diameter have been transported by this process, and although the operation was performed during the summer they are apparently in as good condition in their new abodes as before they were moved.

The phenomenal changes in the appearance of Pasadena, California, are traceable in many instances to the work of the tree mover, illustrated in the accompanying photograph. It is possible to purchase a vacant lot, erect a house, and in a few days surround it with palms and other trees, which give the place the appearance of having been under cultivation many years. This is due to the ease with which experts move the largest trees in Pasadena. A would-be resident builds a house, then purchases large trees from the outlying country, and presto! the place at once assumes the appearance of long growth and mature age. The owner of a Pasadena winter residence purchased an attractive house of the mission style of architecture on Orange Grove Avenue, Pasadena. There were no large trees on the place, so it was decided to move two large palms which were available. The largest had been planted in 1880—a magnificent specimen of date palm (Phœnix dactilifera) which stood about thirty feet high, with a spread of nearly thirty-five feet. The plan was to move the tree from St. John's Avenue to Orange Grove Avenue, a distance of several blocks, and a local florist not only took the contract, but guaranteed that the palm would show no effects of the shock, lose none of its leaves—in a word, suffer in no way except possibly a retarding of its growth for several months. That the guarantee could be made was evident from the fact that the florist had moved thirteen large palms before this winter without injuring them. The work required about five days and the labor of five men and four horses most of the time, and was successfully accomplished at a price less than fifty dollars per tree.

A square trench was first made about the tree to a depth of about six feet, when it was found that the roots grew out in a lateral direction. The object was to leave a large " ball " about the palm, which in this case was a square block about five feet on a side and six feet high. This accomplished, and the sides cut perfectly even, the four sides of a heavy box were fitted against it, and, by iron rods and screws, clamped into shape, so that the root was in a compact square shape and boxed, weighing about seven or eight tons. The tree was now lifted by the aid of four jackscrews, the numer-

Arrival of the Seven-Ton Date Palm, Showing Box and Method of Suspension

ous bottom roots cut and a wooden bottom to the box clamped on. The tree was then suspended in the hole, and was gradually lifted up by the manipulation of jackscrews, until it was at the surface, when the truck was hauled upon the lot, a curious affair, with two wheels in front and four behind. In other words, behind there were two two-wheeled trucks, while heavy scantlings extended lengthwise over them. This was hauled to the tree, which was gradually jacked up, and finally attached by heavy chains to the truck, and the palm was suspended and just clearing the ground. Rails were now laid, and by means of a pair of horses and block and tackle the whole affair was run off the lot over the curbing to the street. Two horses were now harnessed to the pole, and the cavalcade moved slowly up the street, arriving in less than an hour at the destination—shown in the photograph. Here the same operation, only reversed, was repeated; the truck with the tree was run across the curb by the block and tackle and slowly hauled over the excavation, which was about six feet in depth, well supplied with rich dressing.

This was the most difficult part of the work, yet two men manipulated the jackscrews so cleverly that the great palm gradually sank out of sight. Once in perfectly horizontal position the wooden sides of the box were unscrewed and the tree and its earth-surrounded root stood without a crack.

Equal parts of earth and dressing were now thrown in and carefully tamped down, and finally the ground was soaked and retamped. When the débris was cleared away, the palm stood as erect and perfect as it had in its original growing place, showing no evidence of shock of removal. A few days later another palm, estimated at five tons weight, was placed near the same house, adding materially to the appearance and value of the property, and certainly to its age, so far as general effect was concerned.

The ordinary fan palm, so common in southern California, is so tenacious of life that comparatively little care is needed; in fact, a block and tackle has been attached to one and the trunk literally torn from the earth and replanted without injury. One of the most notable examples of this tree moving was seen in Los Angeles several years ago when a fine palm (Washingtonia), estimated at fifty feet in height, was taken from a ranch and hauled through the city to the Southern Pacific depot, where it was replanted directly in front of the entrance, where it still stands, a striking illustration of what can be accomplished by the skilled tree mover. A palm of very large size and goodly proportions was hauled from Los Angeles to the town of Alhambra, eleven miles distant, without injury; and there seems to be no limit to the vigor of these trees, which add so materially to the attractiveness of the country.

Science for the Home

The Dangers of Illuminating Gas

THAT ordinary illuminating gas, such as is generally used for household and public purposes, is dangerous in itself and may be dangerously used are facts that have well-nigh escaped public attention. Dr. Henry Leffmann, in a paper read before the Philadelphia County Medical Society, has performed a useful service in calling attention to these matters, and his paper presents a long array of startling facts and valuable suggestions. Dr. Leffmann does not decry the use of gas in itself for any domestic purpose; on the contrary, he recognizes its value, which is very great. But he does insist, and insists rightly, that most of the trouble lies in inefficient apparatus and connections, and it is to these that he traces most of the trouble.

First of all, the use of improper rubber tubing is alarmingly prevalent. Tubing of an inferior quality soon becomes unfit for use, and only the best should be used. Even good rubber tubing is often improperly used. Gas stoves for heating rooms, says Dr. Leffmann, should not have stopcock connections at the base unless attached by metal tubes with tight joints to the house main. If attached by rubber tubes, there is great danger of the gas being only turned off below. This method of turning out the stove is the usual one with women and children, who can not conveniently reach the higher burner. The apparatus, however, should be so constructed as to prevent the rubber tube, even when of the best quality, remaining in free connection with the house main when the gas is not lighted.

Improvements should be made in the room stoves by which a larger radiator effect could be obtained by a given gas consumption. So far as he has been able to judge, the principal heating effect is the distribution of the products of combustion through the room. This, of course, is unsanitary and doubly so because the shortness of heat forbids the free opening of windows. Dr. Leffmann believes that stoves for heating purposes should be placed only where the products of combustion can escape freely to the chimney. It must be borne in mind that the carbon monoxide poisoning is not the only danger in the use of gas. The products of normal combustion are more or less toxic, and the products of imperfect combustion are still worse.

All burners on the Bunsen principle should be provided with collars for controlling the air supply, and the dealers in these articles should be expected to instruct purchasers in the use of the collar. The escape of the partially burned hydrocarbons resulting from the striking back of burners is very detrimental to health.

The use of illuminating mantles with gas has become very common of late years, and is a great advantage in several ways. The mantle, however, may interfere with proper combustion. It is not at all uncommon to notice a disagreeable odor proceeding from these burners, and this is usually due to displaced or worn-out mantles. The rubber tube connecting the ordinary drop-light with the house main is apt to be a source of danger for the same reason as noted in connection with the stove; the gas may be turned off for convenience, at the base of the light, instead of at the original attachment, and thus may leak into the rooms.

In concluding his paper the author points out that these points may seem trifling, but that practical experience has shown that the dangers exist. A rational co-operation of the makers of gas and gas stoves on the one hand, with physicians and sanitarians on the other, will greatly improve the condition of the air of our living-rooms. Like many household problems this is often neglected.

The Fattening of Fowls in France

By Jacques Boyer

UNTIL a few years ago, French poultry raisers confined their attention to setting their hens and giving a little care to the young chicks; but now the farmers of Normandy and Bresse have learned to appreciate the advantages of the method of artificial incubation, which is continually being improved.

Among the types of incubator most popular in France may be mentioned one which consists simply of a cylindrical vessel with double walls of metal, inclosed in a square wooden box. Two glazed sashes, which form the top of the apparatus, allow the successive phases of incubation to be observed. To prevent loss of heat, the space between the metal cylinder and the box is packed tightly with sawdust. The eggs lie on movable trays in the middle of the cylinder. The incubators are placed in rows on benches about sixteen inches high, in a fairly well lighted room where they are not subjected to vibrations.

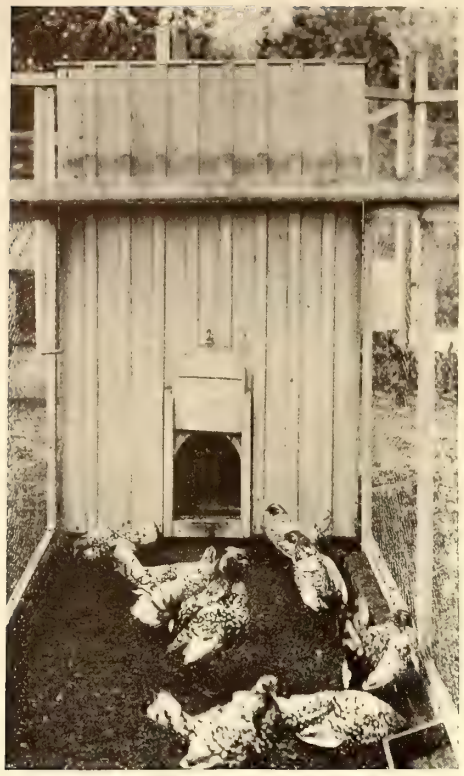
The eggs, if soiled, are washed carefully before they are placed in the apparatus, the temperature of which, as indicated by the attached thermometer, is kept between 39 degrees and 40 degrees centigrade, by means of a "thermosiphon" regulator heated by a kerosene lamp, which is filled and trimmed night and morning. The moisture required for a good hatch is maintained by a bed of moist sand from three-quarters to an inch and one-half thick, on which the eggs rest. There are tubes and cocks for filling and emptying the reservoir, and holes in the bottom of the incubator permit the escape of any excess of water and of the carbonic acid which is produced during the embryonic life of the chicks.

The moist sand is employed in order to prevent the drying and hardening of the soft white membrane which lines the shell of the egg. Without this precaution the chick would not be able to pierce the membrane at the moment of hatching and would die of asphyxiation.

A French Establishment where Fowls are Hatched and Fattened for Market

During the entire period of incubation it is necessary, as Mons. C. R. Thomas informs us, in his excellent work, "Les Poussins" ("Chicks"), to "play the hen" ("faire les convenses"); or, in other words, to turn the eggs over and test their temperature and the dampness of the sand every twelve hours.

The attendant reads the thermometer through the glass cover, opens the sashes, takes out the trays of eggs and allows them to cool for fifteen or twenty minutes, during which interval he examines the sand and throws a glass or two of water on it if it seems too dry. Then he turns the eggs and



A Pen of Silver Bantams

Faverolles and Black Langshans

replaces the trays in the incubator. About the fifth day the eggs are tested with the ovoscope, or egg tester, which is merely a little frame with a handle and a pivoted egg cup, and the unfertilized eggs are removed from the apparatus. The instrument is most simple in principle and sufficiently accurate for the purpose in hand. Testing must be done at night or in a dark room. The operator holds the ovoscope in his right hand, brings the egg, with its large end uppermost, very near a gas or candle flame and turns the cup with his thumb. If the egg is fertilized, the embryo, which bears a general resemblance to a red spider, is seen in the interior. If, on the contrary, the egg appears transparent, it has not been fertilized and it must be removed from the incubator, for, if allowed to remain, it would putrefy and vitiate the air breathed by the embryos, to the injury of the health of the chicks.

About the nineteenth day hatching commences and special attention is required. Now the chicks begin to " dig "; that is, to break their shells. From the nineteenth to the twenty-first day, inclusive, the attendant takes care to keep the broken ends free, and in testing the eggs removes, examines and replaces them as quickly as possible in order to avoid chilling them.

The newly hatched chicks are immediately placed in the drier, a square box heated by hot water to a temperature somewhat lower than that of the incubators. Two or three hours' incineration in this temporary prison transforms the slimy and sorry-looking chicks into pretty birds with fluffy silken plumage, bright eyes and lively mien. They run about, seeking seeds and grains, but the attendant is careful to give them no food for twenty-four or thirty-six hours, which interval is needed for the absorption of the yolk, nearly all of which remains in the stomach of the chick.

During the first day the young chicks are placed on the ground for a few minutes every hour, in order that they may take some exercise. After a number of these excursions the poor creatures cry with hunger. They are appeased with a few crumbs of stale bread, but the soft mash which is to form their first regular food is withheld until the third day.

Toulouse Geese and Barbary Ducks

At the same time they are transferred to the brooders, or " artificial mothers," so-called. These usually consist of boxes some twenty feet long, covered with glass, and flanked by smaller compartments with solid roofs and walls of wire netting. The brooder is heated by a vessel of hot water which is movable along a slide fixed at the middle of its height, by a thermo-siphon, or simply by a lamp which furnishes a current of warm air. The duties of the attendant are to keep the lamp or thermo-siphon in order or to renew the hot water daily, to give food and drink to his guests and to keep their apartments scrupulously clean. When the doors of the brooder are opened in the morning the chicks come out into the lateral apartments, eagerly inhale the fresh, cool air, run about, and, if they feel cold, take refuge again in the central apartment, which they enter by a flight of steps.

Their food, which is placed in feeding cups in the center of the cages, is not lacking in variety. Now it consists of hard-boiled eggs chopped fine (yolk, white and shell together) with stale bread soaked in milk, now of barley or maize flour with chicory, again of grubs, flies or other small insects, raw meat or boiled rice. Occasionally they receive a dessert of pot cheese, of which they are very fond.

Artificial incubation is equally successful with ducks, which, of all domestic animals, are soonest able to take care of themselves. Geese, on the other hand, are seldom hatched artificially in France. Goslings, like ducklings, appear after twenty-eight or thirty days of incubation, and as they are able to go afield at once they have no need of brooders. Turkeys and guinea fowls are far more difficult to raise. They hatch perfectly in incubators, but become susceptible to disease after what is called "the red crisis" ("la crise rouge"). Then they are put on a stimulating diet, with wine or cider instead of water. Some French poultry farmers devote themselves especially to the sale of eggs for hatching chicks or specimens of pure breeds. In this case the fowls must be carefully kept in separate pens.

Turkeys and Guinea Fowls

Without reviewing all the breeds to be found on French poultry farms I will describe a few of them briefly. The Crèvecœur, a breed of Norman origin, is very common in the west of France. The cock is a splendid creature of pure black plumage, with bluish or greenish metallic luster. The chickens are very precocious and can be fattened for the table in two weeks. Pullets five or six months old weigh six or seven pounds each and their flesh is the finest delicacy of the French markets.

The Houdan, a cross between the Crèvecœur and the Dorking, is a hardy breed of remarkable precocity and fecundity.

The La Flèche resembles the Breda in its majestic carriage. A variety of it which grows and fattens rapidly is sold in the Paris market under the name of Mans pullets.

The Mans poultry farmers highly prize the crested Dutch hen, a good layer though a poor setter, and the black Langshan, which is a good winter layer and also an excellent mother.

I pass over the choice and carefully bred English game, the Cochin China, of inferior flesh, the Black Spanish, introduced long ago into England, but still little known in France, and the choice fancy breed called the Silver Bantam, and proceed to consider breeds of ducks and geese.

The Ailesbury duck is a serious competitor of our Rouen duck, from which it differs only in color. Its plumage is pure white, its bill a beautiful rose-pink and its flesh delicate and of good flavor. The Ailesbury sometimes attains a weight of ten pounds, while the Labrador duck, which has a short, olive-green bill and glossy black plumage, with

An Incubator Room in a French Establishment. The Walls are Studded with Prizes for Exhibits of Fowls and Pate de Foies Gras, Won at Fairs

Feeding by Hand with Soft Food, after which the Fowl is Given a Drink

Feeding Geese by Machine for Foies Gras

beautiful metallic luster on the head, back and wings, weighs only two or three pounds.

The duck called the Barbotteur (" Dabbler "), which has a greenish-yellow bill, bright green head and neck, a ruddy gray back with fine black and white stripes, and brown wings crossed with bands of velvety blue or black, is a descendant of the wild duck and retains the plumage of its progenitor, modified somewhat by numerous crossings with other breeds. This duck is as widely extended as the common goose, with which it is often found consorting in the ponds of French poultry yards.

The distinctive marks of the Toulouse goose are size, corpulence, a great accumulation of fat under the abdomen and a sort of dewlap, or wattles, at the throat. It furnishes a liver (foie gras) of the highest excellence and reputation.

Let us now examine the methods of fattening which are most generally employed. Hand or machine cramming is practised, according to local usage and the size of the flock; but whatever be the method used, the fowls are first placed in dark pens in which they can not move. With this object some farmers merely restrict the space allotted to the birds in a closed poultry house and force them to eat large quantities of easily digestible food. Beginning with boiled and mashed potatoes they add successively boiled beets mixed with wheat or barley bran, turnips and cabbage, also cooked and mashed with buckwheat or maize flour. The fattening is completed with chestnut porridge, wet maize flour or such other foods of the kind as are cheaply obtainable in the respective localities, potatoes being always given in the morning as an aperient.

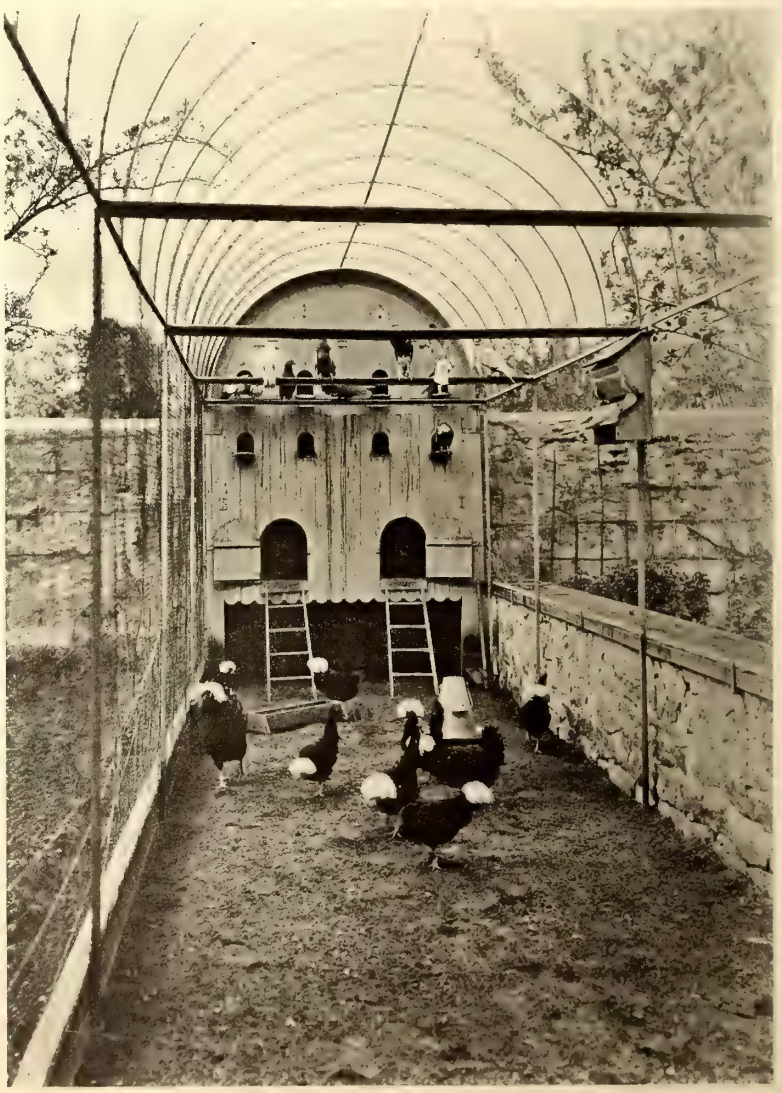
After two weeks of such fare our " Gargantuas " are ready to begin the last part of their agony, in which the extraordinary enlargement of the liver is accomplished. The fowls are confined in special cages called épinettes, some of which hold as many as twelve birds. There are also circular épinettes, which accommodate two or three hundred fowls. In these narrow stalls the poor creatures can move about, but they can not stand erect. They are fed in the following manner: The attendant fills the pump of the feeding machine with soft food and raises the piston to the top of the barrel. An iron weight attached to a cord (concealed by the machine in the illustration) exerts a pressure on the valve which expels the semiliquid contents through a rubber tube which terminates in a nozzle. The feeder lifts the patient's head and opens its bill with his left hand, and with his right inserts the nozzle into the bird's throat.

In this way the required ration is administered to each fowl in succession. All kinds of domestic fowls are fattened by this method, but it is used principally for ducks and geese, which become ready for the table in two weeks. According to the calculations of experienced poultry farmers the fattening of a young bird costs thirty cents and adds sixty cents to its value—which is a very pretty profit. The operation, however, must be stopped at the proper point, for it is possible to fatten fowls to death.

In Normandy and in the vicinity of Toulouse food is often administered through a funnel with a tube large enough to permit the passage of whole maize boiled in salt water. Three times a day a man takes each bird in succession between his knees, introduces the end of the funnel into its mouth and pours in the paste with a spoon, after which he offers his unhappy guest a drink.

Boiled potatoes, or barley or buckwheat flour mixed with curdled milk are sometimes substituted for the whole corn. These foods are made up into pellets, which the feeder, with his right hand, forces into the gullet of the patient, after opening the bill with the index finger of the left hand.

The very primitive method of feeding known as " billing " is now almost entirely obsolete. The feeder filled his mouth with the semiliquid paste and applied his lips to the mouth of the bird. This very unappetizing practice required a special lingual dexterity which was very difficult of acquisition.



A Pen of Crested Dutch Fowls

A Group of Fire Irons in "Dreamwold"

By Durand Nichols

A VERY real interest is invariably attached to the smaller articles necessary to the equipment of the house when they have some special characteristic form, are well designed, well executed and conceived and carried out in a distinctive manner. That an article or a piece of ornament be especially designed in itself is a matter of moment, but mere individuality is not sufficient. Any object, to excite interest, must be good and excellent; these qualities must be perfectly obvious or the merit of individuality and of special intention will be lost. It is important to keep this essential point well in mind, for the designation "specially designed" is often used to suggest merit which does not exist.

As illustrations of the value of small household objects, well designed and of great inherent interest, the fire irons in "Dreamwold," the house of Mr. Thomas W. Lawson, at Egypt, Mass., several of which are reproduced herewith, are very excellent examples. They show, moreover, the value of giving to small household matters the same thought and care, the same attention and consideration, that is generally reserved for the larger and more important affairs. The metal-work needed for the fireplace—that is to say, the andirons, fender, shovel, poker, tongs and stand—are among the minor articles of household equipment, even though the fireplace itself may have importance in situation and utility. Mr. Lawson, however, has shown that there is properly a real importance in these objects, for it is generally understood that the suggestion for these remarkably interesting examples of modern metal-work originated with himself.

The open fireplace enjoys the double advantage of being both useful and ornamental. Its useful functions are, of course, known to all men; but the value of its ornamental purpose is less readily recognized. There are, of course, fireplaces and fireplaces, many of sumptuous design and many that are real works of art. But it is essential to go further than to erect a structure of brick and stone and arrange for its structural ornamentation and decoration. The

Fire Irons Designed for a Farmhouse

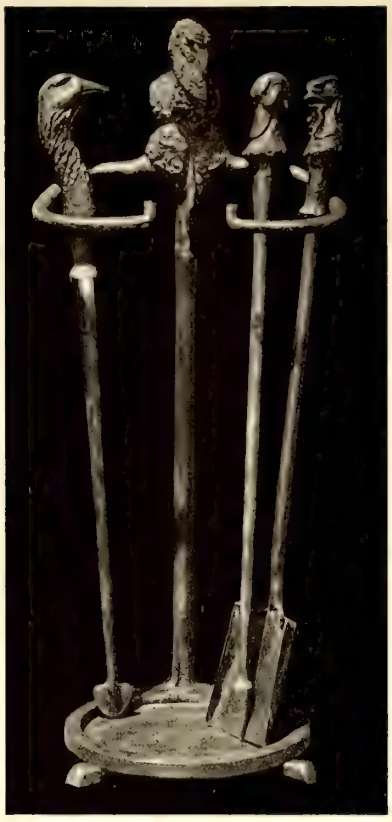
Rustic Andirons

fire irons must be in keeping with the whole room, as well as suited to the fireplace. This does not mean that a definite uniformity of design should be followed; but it does mean that if a decorative effect is sought, if an artistic interior is desired, the fire metal-work must be brought up to the artistic standard of the room and be designed in harmony with it.

Hence the value of Mr. Lawson's fire irons as an object lesson in design as well as an indication of the great care with which his fine place at Egypt is furnished. He took especial pleasure in giving personal attention to details which ordinarily receive scant attention from the busy owner of a great country estate. This is particularly true of his ironwork. Externally his estate is marked in a thoroughly individual manner by the signs and weathercocks of wrought iron especially designed for each building, forming at once a decoration and a distinctive mark, whereby the purpose of each structure may be ascertained at a glance. This definiteness of indication is not needed within the house, but there, also, the ironwork has had special attention, and the iron tools of the fireplace are among the most charming bits of furnishing in the more important rooms.

They are all especially designed and are of the highest interest. The jolly pair of stout old men, standing erect and stationary, are full of life and character. The pair of old country folk, one astride a post, the other apparently sitting on a fence, are equally happy in originality of conception and quite as striking in their individuality. The tongs, shovels and pokers, as well as the stands in which they are placed, are equally characterized by vitality and life, and have an individual interest that implements of this sort rarely possess. There are many groups of these fire irons in "Dreamwold," each fireplace having its own set of andirons and tools, no duplicates whatever being used.

The interest of these articles is twofold. They are interesting in themselves; the way, perhaps, in which they are most apt to be viewed, and the way in which they should be considered. But they are also of interest as examples of the way of doing things. In arranging for these fire irons Mr. Lawson had only his own taste to consider and the particular use he intended to make of them. But while proceeding for



Andirons and Fire Tools

his own personal pleasure, he was also arranging for an agreeable lesson in the art of household decoration, which is not the less important because concerned with one of the minor matters. His fire irons not only have utility, but they have artistic merit of a very unusual order. Mr. Lawson's purpose was not so much to teach a lesson as it was to obtain some useful articles for his house which should have merit in themselves.

Utilizing the Cellar in Winter

By George Ethelbert Walsh

THE cellar of the modern country home should be a dry, hygienic place, where a multitude of things can be safely stored, and at the same time it should be utilized for purposes which will add to the pleasure and profit of the occupants. The cellar has undergone rapid evolutions in the past dozen years, and instead of a wet, unfloored place, where disease germs were bred, it is usually provided with a cement or concrete bottom, brick walls and plastered ceilings. With the heating apparatus located in it the cellar is kept from freezing in the coldest weather, and it can be made as clean and sweet as desired.

However, the cellar is primarily intended for the storage of certain perishable articles which need a low temperature, and it is unwise to use it exclusively for other purposes. The heating apparatus is very apt to make the average cellar too warm for the safe-keeping of fruits and vegetables, and also for many dairy products. The ideal place for keeping perishable goods of this nature should have a cold, dry temperature just above the freezing point. To obtain this at all seasons requires a little foresight and preparation.

The cellar of the modern house should be divided into at least three compartments. One for coal and wood, which need not be large, but the partitions of which should be so tight that coal dust and ashes from the furnace can not escape to other parts of the cellar. The second compartment should be for the storage of perishable goods, such as winter fruits, vegetables, and butter, cheese and eggs. This, in turn, should be subdivided into separate compartments for the dairy products and fruits and root crops, so that the former can not get tainted by the odors from the latter. The third compartment should be for a general workshop, flower boxes and for miscellaneous storage of articles that are not needed in the living-room.

Assuming that the cellar floor is of good concrete, which will insure protection from dampness and excessive moisture, it is wise to make the division into compartments according to the special needs of the different work. The perishable goods require no sun, and it is better to locate the compartment for them on the north or northwest side of the cellar, where it will be easier to secure an even temperature throughout the winter. To insure this, however, double sash windows should be supplied, and as the winter advances the windows should be closed by piling straw litter or hay against them on the outside. At least one or two should be left unprotected in order to secure proper ventilation and sunlight. Fresh air should be admitted every pleasant day, and when the temperature is not excessive outside a continuous circulation of air should be obtained by an outside shaft and an open window.

The ventilating shaft is nothing but a simple, elongated box or trough which enters the cellar opposite the window which is to be left open. This ventilating tube should have an inside and outside door or sliding board to close it in cold weather. The window that is not closed tight for the winter should have an outside wire netting to prevent the sifting of articles in the cellar. By having double window sashes the cold can be kept out of this single window very well, but an

inside board, lined with newspapers, arranged to drop down and hook on very snugly, will add to the protection from outside air at night time.

The compartment for perishable articles should be separated from the rest of the cellar by a partition of three-inch studs and joists, with plain pine or white wood boards nailed across them. By tacking up an inside lining of old newspapers the partition will prove very effective in keeping out the heat and dust. All cracks and knot holes can be closed with the newspapers, and by pulling them down and replacing them with new papers once or twice in the winter the compartment for perishable articles can be kept very clean and sweet.

In this compartment the inclosure for milk, butter, cheese and eggs should be separated from the place for storing apples, potatoes and other fruits and vegetables by a partition of light boards, lined inside and outside with tarred paper, or, if one objects to the odor of the tar, tack common manila paper over the boards. By inclosing the compartment for dairy products in this way we secure complete immunity from all odors and dust. As butter absorbs odors and microbes from the surrounding air, it is quite important that they should be protected from anything that will injure them. A decaying potato or apple, or the odor from onions, carrots or turnips, may very quickly spoil the flavor of the best butter.

The compartment described should open into the cellar where the heating apparatus is located by a double door, and it may be that heat from this room will be needed during a few days in the middle of the winter to keep the temperature above the freezing point. As a rule, however, the compartment built as described will never reach the freezing point in the coldest weather, but the temperature will hover just above it and remain there all winter. A uniform temperature of a cellar is almost as desirable as a low one.

The compartment for the heating apparatus and the coal and wood bins can be located conveniently on any except the south, or sunny, side of the cellar. It may be north, east or west, but the southerly exposure should be kept for other purposes. The coal bin should be made as dust-proof as possible, and this can be obtained by simply using old newspapers for covering crevices and knot holes in the wooden sides. They can be tacked on several sheets thick, and by overlapping them at the edges they will make the bin tight. A little tar daubed over them will make the protection additionally perfect and tend to make them more permanent in character. By keeping all the dust and ashes in this part of the cellar we secure results that greatly lessen the labor of the winter. When coal dust and flying ashes penetrate every part of the cellar, it is impossible to keep articles clean and fresh. This can be readily demonstrated by examining the whitewashed surface of the boards after the cellar has been closed up a few months. The sides of all the partitions opening on this part of the cellar should be whitewashed fall and spring, and the accumulation of dust and dirt can thus be partly neutralized. By using an old broom to clean the boards before the whitewash is applied we add to the general cleanliness and sanitary condition of the place.

Finally, we have the third compartment of the cellar, which may prove a very profitable and pleasurable place for many winter occupations. Facing on the south side the windows admit sunlight during a few hours of the day. This will make the compartment light and pleasant, and it can be fitted up with a few luxuries, such as old chairs, odd bits of carpet and sofas that have been discarded from the living-rooms above.

There should be built in this part of the cellar a carpenter's bench, provided with a hand vise, tool rack and other conveniences. No one is too clumsy not to be able to use carpenter's tools for many small repair jobs around the house. There is an endless number of improvements to be made in the winter season, and preparation for spring can be anticipated in the cellar carpenter shop. Sashes for hotbeds and cold frames can be painted and new glass put in, window blinds repaired, flower boxes designed and built, seed frames constructed and many other simple articles of necessity manufactured. A coal stove in this part of the cellar should supply additional heat on cold days, although in ordinary weather the heat from the furnace should be ample. Sufficient heat can be admitted during work hours by opening the doors connecting the two compartments.

Another very agreeable function of the properly partitioned cellar in winter is to raise flower plants, seeds and vegetables exposed in the windows of the workshop. Over the work bench a series of shelves should be constructed for holding flower boxes and pots. A good many plants which do not present a fine appearance can be temporarily banished to this cellar flower window for recuperation. It is a sort of winter hospital for them, where they can not be seen while engaged in the process of building up impaired vitality. A little watering, proper heat and good air will bring up the plants, and there is no place like the cellar window shelves for doing this.

Seedling boxes should be built on a shelf near another window with a southerly exposure, and there seeds for forcing very early plants should be kept. Such seedlings can be started as early as February. Plant the very earliest in potatoes or turnips with the inside scooped out and filled with rich soil. As the seedlings come up and show their second pair of leaves they can be transplanted to pots or boxes without disturbing their roots. The potato or turnip holder decays in time in the soil and furnishes food for the roots. By planting delicate spring plants in this way it is possible to secure flowers of annuals a month or two ahead of your friends. More than this, one can secure blossoming annuals for Easter display. By raising a few of the prettiest in the cellar window a novel effect can be produced.

Or if one's taste runs to potted strawberries or English cucumbers or tomatoes, it is possible to convert the shelves of the cellar window into bowers of green vegetable vines and plants, with red and green fruit abundantly distributed around. It is necessary to be able to maintain a temperature of seventy or more degrees in the cellar to secure good results with potted strawberries or English cucumbers. If such a temperature or a little above can be depended upon the potted plants should prove a success.

Six-inch pots are suitable for these plants, and rich, fertile soil should fill the pots. They require plenty of sunlight and moisture as well as heat. With these supplied they will do well. The few insects which attack them can be kept down with a little precaution and daily examination of the leaves.

The important question that occurs to many in attempting to utilize a cellar for such varied purposes is the degree of sunlight admitted. The ordinary cellar window is a small affair, scarcely more than two by one feet, and until architects show a more generous desire to increase the size houses will thus be spoiled in the making. If the foundations are not high enough to admit of larger windows, a sloping excavation such as made for cellar stairs should be dug down below each window. The bricks should then be knocked out and a window frame at least three or four feet long and two or three feet wide should be placed in the walls. Double sash will be needed for winter work, and the sides and bottom must be joined carefully to shut out the wind and snow. Such large windows on the south side of the house will admit three or four times as much sunlight as the ordinary cellar windows, and when we consider the sanitary value of sunlight in the dampest part of the house it will be agreed that the extra expense and work are well paid for. The long windows will prove no disfigurement to the place, and the excavation can be surrounded by a small iron fence.

The Cultivation of the Morel

By Jacques Boyer

THE morel (Morchella esculenta) is distinguished from all the other edible fungi of France * by its peculiar appearance. Its pedunculate, deeply pitted head, of which the depressions are sometimes regular, but occasionally assume the appearance of mere furrows with wrinkle-like interstices, prevents it from being confounded with any poisonous species of fungi. Its savory and fragrant flesh causes it to be highly prized by gourmets; and so, when the pale yellow and brown morels make their appearance in the woods under the influence of the spring showers of April, the peasants hasten to gather them in order to sell them at a remunerative price to the dealers in early fruits and vegetables. Unfortunately, it is a treat that mycophagists alone are capable of enjoying, since these honeycombed discomycetes do not grow in so great abundance as the boleti and cantharelli. Certain mushroom growers once tried to cultivate them, but did not succeed in obtaining encouraging results. However, along about the year 1872, a man named Geslin, by sowing some fragments of morels in an artificial soil composed of one-fifth rotten wood, two-fifths of earth taken from a place where these fungi grew, and two-fifths of rich earth, obtained a small crop for several years in succession.

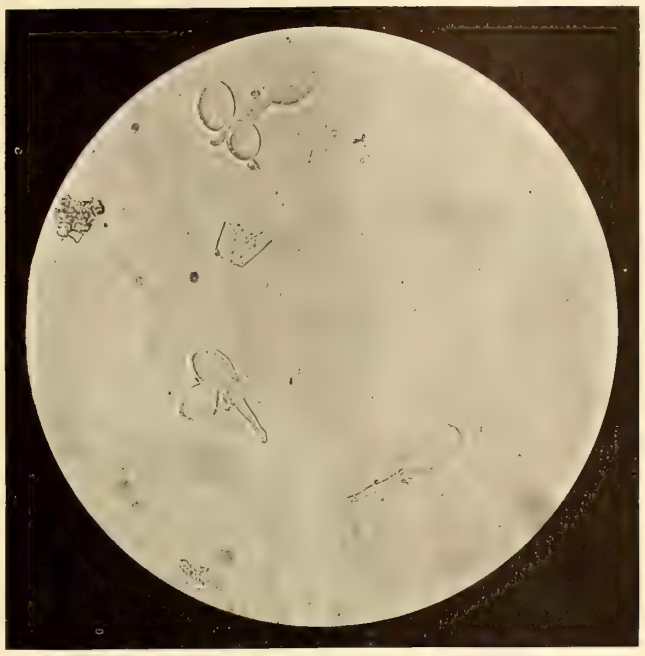
The Morel (Morchella esculenta)

This process was not based upon any scientific data, as were the researches of Mons. Charles Repin, having for their object the artificial culture of the morel from the spore. This scientist proceeded as follows: He took some glass tubes forty inches in length and one inch in diameter and filled them with vegetable material reduced to the state of humus (rotten wood, dead leaves, etc.). After a preliminary sterilization, he put some spores in one of the extremities of the tube, after which germination took place very rapidly. At the end of twenty-four hours the mycelium made its appearance, at the place where the spores had been deposited, with the aspect of a fine white down, of which the filaments ramified in the vegetable mold, and in a few weeks extended throughout the entire length of the tube. Into the end of the latter was then inserted the extremity of another and identical tube. When the operation was conducted under protection from mold, the propagation of the mycelium was continued into the second tube; but, in case of contamination, the mycelium vegetation perished. Therefore, in order to prevent the invasion of the noxious mold, it was important to select as an artificial soil some sort of vegetable débris of which the fermentable substances had disappeared as a consequence of decomposition. A few months later on the filaments of the mycelium (which are represented in the accompanying micrograph at the beginning of their growth from the spore) were seen to be more voluminous, and sometimes even there were observed felted masses that had resulted from the agglutination of various filaments. With age, the mycelium became capable of resisting the effect of mold, and after that it was possible for M. Repin to establish open ground cultures in the country. In imitation of the process employed with the common mushroom (Agaricus campestris), he prepared masses of vegetable mold of varying composition which he buried in trenches, and here and there inverted adult spawn taken from his tubes. Several

* The morel occurs, under a variety of forms, in various parts of the world. It is more or less plentiful in this country. As it dries very readily, and may be kept for some time, it is much used by European cooks for flavoring gravies. It is also dressed in various ways when fresh, and makes an excellent dish when stuffed with finely minced white meat. It may likewise be advantageously employed, instead of mushrooms, for making catchup. Morels are particularly fond of burned soil, and the collecting of them is so profitable to the peasants in Germany that the latter were formerly in the habit of setting fire to the woods to encourage their growth, till the practice was made punishable by a special law.—Ed.

springs passed without the appearance of a single morel upon the beds; but in 1900 and 1901 half a dozen of the succulent fungi appeared upon a compost of apple residua and around a stratum of dead leaves rendered alkaline by carbonate of soda and buried in a silo five years previously.

For the practical cultivation of the morel the essential thing seems to be to know what are the substances necessary for the nutrition of the fungus in the very complex media mentioned above. In a recent communication to the Academy of Sciences of Paris (April of the present year), M. Molliard favors fermentable sugars. M. Repin thinks that it is necessary to have recourse exclusively to compounds of the cellulose group. The co-operation of a microbe, however, appears to be indispensable in order to permit the morel to pass through the cycle of its development. Thus would be explained why it is that this excellent cryptogam, like a number of the higher fungi, appears only at one time of the year, its vegetation being connected with the season phases of the microbian life of the soil. However this may be, the problem of the artificial production of the morel is now solved scientifically, and mushroom cultivators may soon be raising this esculent on a large scale, to the great joy of the gastronomers of the two worlds.



Germination of the Spores of the Morel

Co-operation in Forestry Work

MOST of the work in forestry in the United States has been directed toward commercial ends; that is to say, for the financial returns it would yield. A new departure in such work has recently been made by two individual owners in New York State who have sought the aid of the National Forest Service in the management of their estates in which the commercial end has a subordinate value. The work has been undertaken for the double purpose of accomplishing results and of showing how they are brought about. The incident is of interest not only for what it is hoped to accomplish through it, but because it exhibits an active participation in forest work by wealthy men whose object is, primarily, to have fine estates, managed in the best way, and in which the financial returns, while not ignored, are of comparatively secondary importance.

The Household

The Man as Housekeeper

THAT the occupation of housekeeping is one of the exclusive prerogatives of the women folk is one of the standard fetishes of American domestic life. Nowhere else is this notion so profoundly supported, nowhere else is it so widespread, nowhere else is it so universally believed, nowhere else is it so completely adhered to. And nowhere else, it may surely be added, does it produce such disastrous results.

In England there is much less support for the notion than in America, although in that country the man who does the actual labor of housekeeping is comparatively rare. But England is a land that abounds in good servants, men and women, and the English man servant—the trained article—is thoroughly saturated with the art of domestic life. On the Continent men habitually perform services that, in America, are exclusively given to the women. The men "chambermaids" that one meets in the French hotels are among the strangest sights to the American freshly gone abroad. But they perform their work quietly and without fuss; that there is any sexual significance in the work they do would be to them the most singular of all ideas.

One meets the man houseworker everywhere on the Continent, and is glad to have his deft, careful, quiet service. It is true these people expect a tip, but what hotel servant does not? They have to work, and they have taken the work which has easiest come to them and do it well and ably.

And there is no reason at all why men should not sweep and dust, make beds, clean windows, fix the fire, clean the grate, arrange the furniture, while their special adaptability to the art of cooking is amply attested by the princely salaries the heads of this interesting profession receive in distinguished instances. What is there in all this that a woman can do better than a man? What is there in this that unfits a man for association with his fellows, or lowers him below a rank that he thinks is rightly his?

The fact is the domestic question has been greatly misunderstood in America. There is no reason at all, in the work itself, why all the household work might not be as well done by men as by women. But there is a prejudice against it, and that settles the matter. There is nothing else, and no other cause of trouble. Domestic service is regarded as degrading not because it is degrading, but because it is thought to be so. A vivid imagination, enhanced by the prejudices of many generations, has made this feeling a national one, and the feeling is so widespread that domestic service has been practically closed to men until very recently.

Fortunately, a saner view of the situation has arisen of late, partly from seeing the work of men servants abroad, partly from the well recognized superiority of Japanese and Chinese men servants, and partly from the extraordinary incapacity of the average woman servant. Every housekeeper in the land can contribute a bitter chapter to the latter subject, and the women must thank themselves if the men supplant them in this important field. That, however, is not likely to happen for some time to come, but the movement has begun. It indicates a development of the greatest interest.

Civic Betterment

The Meaning of Civic Betterment

FOR several years past—the actual number is somewhat limited—artists and others have been proclaiming the value of civic beauty or civic betterment—call it what you will—from the very housetops. Public attention has been aroused on a new subject, and if there is not yet a profession concerned exclusively with municipal embellishment the time is not far distant when it will be recognized as one of the artistic professions, and perhaps one of the learned.

The movement is not only one of great interest in itself, but it is full of valuable and suggestive meaning. Its visible result, of course, lies in the improved aspects of our cities and towns; but behind that is a broader value, which consists in the most widespread interest in things artistic that has not been manifested in modern times in any artistic subject. The movement is world-wide, so far as Europe and America are concerned, and has even reached into the Orient, where the new message of civic beauty has been carried by Western practitioners. It is limited to no country, for all countries of Europe have felt it and given visible expression to it. Sometimes the results have been greater in one place than in another: the small town and hamlet are not able to reach the great results that may be attained in a large city; the large city may not always be able to create the beauty it would out of the difficult materials and conditions that exist where real estate is valuable and vested interests are measured in large sums. But the movement has now become so very general that hundreds of improvement and betterment associations flourish amazingly where, but a few years since, their name and purpose were alike unknown.

It would be too much to affirm that this means a quickening of the artistic public conscience. The public is not at all interested in art as art. But if it can be shown that art has a financial value, that better streets mean better houses and better prices, the innovations proposed by civic betterment will be eagerly welcomed and the results the more appreciated.

There is so much to be done in the way of civic betterment in America that the first stage is largely one of bettering conditions rather than artistic revolution. The latter represents the second, and perhaps the final stage, and may be reached in time. Meanwhile, it is the goal to look for rather than the goal attained. Practical matters are more quickly realized by Americans than matters which do not have an immediate practical aspect. Any one can value a good road, because one travels on it and realizes in person its superiority to the road that is not valuable. There is less general regard for an agreeable house or a fine vista, for a well arranged country place or a splendid business front. There are things which seem to require some special training to properly appreciate, and unless appreciated properly their value will be wholly lost.

The real meaning of civic betterment is that the public mind has been definitely turned to artistic matters in so far as they relate to public embellishment. Appreciation of the value of certain improvements is already recognized; appreciation of the value of other improvements must follow. This, at least, is the hope of the friends of civic betterment, and the results already accomplished indicate that this end will surely be reached. This, in itself, is a valuable result, indicative of a better future.

Road Improvement

THE agitation for good roads in America has had three stages of progress which have amounted to an actual evolution. The first persistent and insistent voice raised on this subject was that of the bicycle rider, who, once astride his machine, was amazed to find there were comparatively few roads fit for him to travel over, certainly few that afforded comfort and ease. The period is not so remote that the effects of the bicycle campaign have been forgotten. That the demand for good roads was not always wise and reasonable is probably true, but the campaign, as a whole, was well conducted, for results began to be reached, and they have broadened more and more ever since, although the bicycle as a force in politics, or in any form of current life, has completely disappeared.

It is a singular fact that the farmers, while the original foes of the bicycles and the movement for good roads, are now the most zealous advocates of this indispensable modern betterment. One can not blame the farmers for their dislike of the bicyclers, for the latter invaded the quiet rural roads in a new and unheard-of way. They demanded the best places on the roads and recognized no rights but their own. The farmers were an easy mark for the city boys, whose guying of them added fresh zest to the pleasure of bicycling.

But good roads began to be built. The bicyclers pulled so many wires, they worked so many interests, that good roads began spreading their way through the country in all directions. The bicyclers regarded them as built for their own special use. They did not go so far as to claim exclusive use, except for bicycle paths, but that they were especially theirs they did not hesitate to conceal. And the farmers used these roads, many of which they had paid for in whole or in part, and found them very good. They found their horses could pull heavier loads with less cost than on the old unmade roads to which they had been accustomed. They awoke to their value, with the true American appreciation of cheapness and anything that led to cheapness, and the second great factor in the spread of the movement for good roads was enrolled, and enthusiastically enrolled in the good work.

The value of the farmer conversion to the movement has settled the matter for all time. Bicycles may come and go, but the farmer lives on forever. We can not get on without him even if we would, and we certainly would not if we could. The farmer's interest being thus assured, there is no reason to look for any lessening of the general interest in good roads. That a good road is expensive to build, that it must be kept in repair, and that it is more or less a source of constant expense, is undoubtedly true; but most people now understand the benefits of good roads and there is no longer need of arguing for them.

A final element, so far as the present permits, has arisen in the automobile. The automobilist requires better roads than the bicycler, because he takes more space, goes further and travels faster. But the farmers had already awakened to the value of good roads before the automobile became a factor in the agitation. The position of the automobilist is supplementary to that which the farmer is now glad to assume.

The Garden

The Garden Month by Month—November

NOVEMBER is the last month of the year in which any outdoor work will be done. If the weather is warm and pleasant—and there are often such days in November—the tendency to leave any blooming plant out of doors will be difficult to resist. The dismantling of the flower beds often enough seems unpleasant labor, for it is taking away good old friends, removing the notes of color and life that have enlivened the house grounds, and substituting for it the dreary soberness that is too often characteristic of winter. But the dismantling of the flower beds does not necessarily mean destruction. Every flower lover who has planted her garden with annuals knows their period of life is short, and as a matter of fact many of them exhaust themselves with bloom before the summer is over. Many of these plants will have been removed before the end of the fall, and those that survive will be little lost. The stronger blooming plants, those that are planted from pots each spring, belong to a different class, and their final removal from the ground means the ending of the outdoor garden for the year.

The ardent garden lover is, no doubt, constantly finding things that she would have done otherwise, and the present season is no exception. As the leaves fall from the trees and shrubs great bare spaces come into view and an utter barrenness settles upon the land that, but a month ago, was full of green foliage and beautiful flowers. The experience is a common one, for most gardens are planted for the summer effect, and little attention paid to the winter aspect. There could be no greater error, particularly if one lives in the suburbs or in the country the entire year. Summer is, of course, the garden season, and all gardens are arranged and planted with special reference to it; but the winter months should not be overlooked. The garden aspect in winter is quite as important as its aspect in summer. It must, at all events, be considered.

Here it is that the value of the evergreens is unsurpassed. The great beauty of these trees requires no comment, but their value as winter decorations of gardens is not recognized as much as it should be. All landscape gardeners make use of evergreens for notes of color and warmth in winter and their abundant use will help the garden as nothing else can do. One realizes their lack as the borders become bare and there is nothing but openness and cold; and down goes a note that in the next planting season this want will be remedied.

On or two practical suggestions may be added. Do not undertake to pass through a winter without a supply of potting soil: it is sure to be needed before the winter is over or before the spring has advanced. Lay in a liberal supply, as your needs can not be estimated closely. Roses of tender growth should be laid on the ground and fastened down by a weight of some sort on their tips. The canes should be bent carefully to prevent breaking. They should be covered with leaves or litter and held in place with boards. Tender plants of various sorts may be protected by means of headless barrels, boxes or similar covers, which should be filled with leaves and covered with loose boards. Fertilizers should never be applied to dormant plants.

The Window Garden

THE garden activity which has been manifested out of doors all summer will now be transferred to the window garden within doors. No true flower lover will remain without this charming adjunct to the pleasant house. It will give as much pleasure as the outdoor garden—perhaps more; for all sorts of flowers and plants bloom in the summer, and the rarer blooms of the indoor garden are the more beautiful because of their scarcity. Moreover, the indoor plants grow and bloom directly under the eye; they form part of the inhabitants of the house, and are genuine companions, carefully grown by hand and nurtured by daily attention.

Like the outdoor garden, the window garden can be conducted on various scales. The beginner in such matters will do well to keep along the simplest lines possible. Many annuals can be successfully grown within doors and will yield charming notes of color with comparatively small efforts. A few simple, homely plants, while not giving all the results that might be desired, will add immensely to the interest of the home interior and will give welcome notes of color of great beauty.

Decorative house plants, as they are technically called by the florists, constitute another class of winter plants. Their beauty is of the finest sort, because only especially beautiful plants are grown for this purpose. Their attractiveness is also immense, and when they can be afforded they form the handsomest of all house decorations. Many of these plants can be grown from seed, but if room can be had for but two or three it will be found wiser economy in the end to purchase growing plants from reputable dealers. The seedlings do not always mature well in home culture and the plants often require more attention than the amateur is competent to give.

The window garden needs, therefore, considerable attention at the very outset. If one has had no experience whatever it will be safest to begin in the smallest way, with plants of known habits of growth and of easy cultivation. Indoor conditions vary greatly. Some plants will thrive with a night temperature of 50 degrees, others with a temperature of 60 degrees; the day temperature, in both cases, easily averaging from 10 to 15 degrees higher. One must know and understand these temperature conditions and their relations to the plants before embarking in a window garden for which success is desired.

House plant culture is further complicated by leakage of gas, from the dryness of the atmosphere, from overheating and from lack of heat. It requires a plant of sturdy habits to live through a winter successfully in the average American house, the more especially since the care and attention it really requires is often not given it. The owners of large houses change their house plants from time to time, sending them down to the greenhouses for recuperation after a season inside the house. The method is an obvious one, yet it suggests the difficulties the amateur must contend with. For such people have competent gardeners who know just what to do and how to do it. If, under such circumstances, constant change is necessary, what must be required without this expert knowledge! For small plant growers the most satisfactory results are likely to be obtained from two or three decorative plants of acknowledged easy growth.

The Observer's Note-Book

Litter in the Parks and Streets

THE OBSERVER often wonders if an era of untidiness is not sweeping over the American people. It would, perhaps, be truer to say, over the American landscape, for he does not believe that the native American is becoming untidy, nor that he would willingly submit to a greater amount of litter in the streets and public play places than he has hitherto been accustomed to. Do not our American communities spend large sums annually in meeting the expenses of street cleaning departments, and do not these annual expenditures increase each year in an alarming ratio? The accounts of municipal housekeeping which come to light from time to time would seem to answer these queries in the affirmative.

Yet our streets are dirtier and dirtier, our parks and playgrounds the more littered with waste papers and other débris of quiet days spent under the trees. Some complaint on this subject originated in the summer in that most peaceful of communities, the Borough of Brooklyn. Brooklyn, as those who remember it will recall, was at one time a municipality of itself, a proud, great city, whose enviable distinction was its immediate proximity to New York. In due time it lost its independent existence, and became merged into that great conglomeration of farm land and tenement houses known as the City of New York, and to which the very awkward title of "Greater New York" hangs with singular persistency. Of the many problems of municipal life which this change made, none have been more curious than those which center around the query, Did Manhattan annex Brooklyn, or did Brooklyn annex Manhattan?

The politicians of both great boroughs have not yet been able to agree as to what actually happened, but meanwhile the denizens of Manhattan's great East Side—so the Brooklynites aver—have spread themselves out over Brooklyn's beloved Prospect Park, carried their lunch baskets and papers within its precincts, disported themselves upon its beautiful lawns, and left them littered with rubbish and messes of the most untidy sort. Whereupon the borough Park Commissioner came to the rescue and ordered all persons with lunch baskets kept out of the park!

Then there was a mighty howl. The downtrodden lunch eaters rose as one man, one woman, one child. Their rights were invaded, their privileges usurped, and they found a defender in no less an aristocratic organ of public opinion than the New York Tribune, which apparently employs an editor who lives in Brooklyn, and whose knowledge of things Brooklynite seems very complete—as complete, perhaps, as any Manhattaner thinks it should be. The immediate result of the Tsarlike action (if such it was) of the Park Commissioner was, that the next time the invaders from Manhattan—for of course no Brooklynite would consume food in the sacred precincts of Prospect Park—came to Brooklyn, the adjoining curbstones were lined with thrifty lunch eaters, all busily engaged in eating their lunches, which, once consumed, were then carefully trotted into the park, although not in the way either they or the Park Commissioner intended.

With the further details of this sad matter The Observer has nothing to do; but he would like to submit that there is much arrant nonsense in the "rights" which people are supposed to enjoy in the parks. The parks are supported by the municipality for the people as a whole, and any rights which the people have in them rest on this elemental condition. It would seem, however, as though the question of public rights should be carefully considered.

For example, the taxpayer is clearly entitled to greater consideration than the non-taxpayer, and it is equally clear that the American citizen is entitled to greater consideration than the foreigner who may be but temporarily sojourning within our gates. It might, indeed, be safe to go further, and maintain that the taxpayer is clearly entitled to greater privileges than the non-taxpayer. If the municipality has parks it is only able to maintain them from the funds collected from the taxpayer, and while our land does not encourage classes, we are prone to believe that the man who pays for the goods is entitled to them. Such, at least, appears to be sound business sense.

Shall we, then, open our parks and public places promiscuously to any one who happens along and who goes into them solely because he is on the ground, convenient and accessible? Shall we open our parks to untidy folk who will not gather the waste they bring in with them and leave the ground as clean and in as good condition as they found it? Shall we permit them to do as they please, and then take public money, not one cent of which they have contributed, to redeem the evil they have wrought, and make the spots where they have been disporting themselves clean and sweet?

The Observer knows a place—not a park—where, but a few years ago, no foreigner had made his home. There was one street in particular, wide and splendid in dimensions, in which the grass grew as luxuriously as in any Philadelphia highway. It was peaceful and serene, albeit somewhat sunny and dull. In time progress came. That is to say, houses were built on this street, houses which, notwithstanding its width, were small in size and in cost. They attracted, as they were intended to attract, people of small means, and, apparently, people of small ideas. The grass disappeared from the street, the quiet went with it, and in their stead appeared all sorts of things: old iron pots, piles of waste paper, discarded clothing, bits of oilcloth, used-up flypaper, rags, a rejected mattress, pieces of pottery and glass. The list is not exaggerated in the least, nor is the imagination drawn upon. The cleanliness of that street has, apparently, departed forever. And most of these people are of foreign origin, hardly speaking a word of English.

The Observer knows another place, a plain country road, lined with trees. On one side are three or four houses, filling as much space as a couple of city blocks. On the other side is farming land, still farmed though well within municipal limits. The natives do not sit out under these street trees, for they all have porches of their own on which to pass a hot summer afternoon. Strangers come there from more crowded regions. They bring their babies, their baby carriages and their baby milk bottles; they bring newspapers to look at and they bring food tied up in untidy bundles. And there they pass a pleasant afternoon, filling the air with talk in strange harsh languages, and when they retire they leave behind them exactly everything which they do not wish to carry away. The natives, then, must leave this débris where it was left, or pay some one to go out and gather it up. Is it fair?

The Observer thinks not. This untidiness may not be American in its origin, but it is becoming more and more typical of American cities and towns. We are letting in all sorts of people to settle with us and be with us, and they enjoy here privileges they never thought of having at home.

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THE CITY AND THE COUNTRY.

A GREAT feeling of unrest has seized the city dwellers. For years they have been regarded as the most fortunate of mortals. The very word "city" is filled with magic inspiration. It sums up, in a sense, all the delights and all the resources of civilization. Perhaps it does. Cities are fine places. They abound with fine sights. They are filled with fine people. They contain everything that every one wants and needs, and many things good folk do not want and certainly do not require. The cities have retained their supremacy, and people have rushed to them as veritable wells of treasure, where money and pleasure, learning and success, can be had almost for the asking, and certainly as rewards for residence within their midst.

The cities were never so popular nor so populous as to-day. More people live in them than ever before. More people come to them than ever came before. Never, in all history, were so many people crowded together in one place as in the great cities of to-day.

Yet their inhabitants are not satisfied. Multitudinous as are the pleasures of the city, they are no longer complete enough or ample enough for all who would absorb them. It has been discovered that the advantages of city life are limited; that great and wonderful as they are, they are not sufficient for every taste nor for every mind. Too many people have settled down in the cities, and the hordes of people whose mere enumeration make the census takers stand aghast create discomfort, add to expense and entail numberless unforeseen disadvantages.

The astounding discovery has been made that there are spots upon the sun. The envied persons who have been residents of cities do not welcome the newcomers as the latter hoped they would be welcomed. That the cities have drained the rural regions has long been manifest. This situation was tolerated so long as no great inconvenience was experienced by any one; but the moment the newcomers became so numerous that the older residents were crowded, while the new ones themselves found it difficult to obtain an abiding place, a new condition arose which entirely changed the aspect of city living and greatly altered the general conception concerning the advisability of living within these charmed limits.

The pendulum has, therefore, swung back. While vast crowds are still streaming into the cities from all sides, other crowds, almost as numerous in point of number, are swarming out. Both streams represent people of every conceivable means. Among the incomers are men of huge wealth who will make the resident millionaires sit up in amazement at their prodigal expenditures. Many there will be also who, as many others before them, have come to make their fortune, and rise to such heights of fame as their own inherent merits and personal opportunities may permit.

The crowds that go out are also persons of varying means. Some are people of wealth who have taken great homes in the country; others are persons of moderate means who think they will be better able to live on a certain income in the country than they could in the city. Others, again, are unfortunate individuals who have tried the city and failed.

But the animating thought in all this great company is the joy with which the country life is welcomed. It is a strange and a new thing! But a few years ago the tendency toward the city was so pronounced that country life, with all its manifold blessings and advantages, was not thought of save by a few misguided souls

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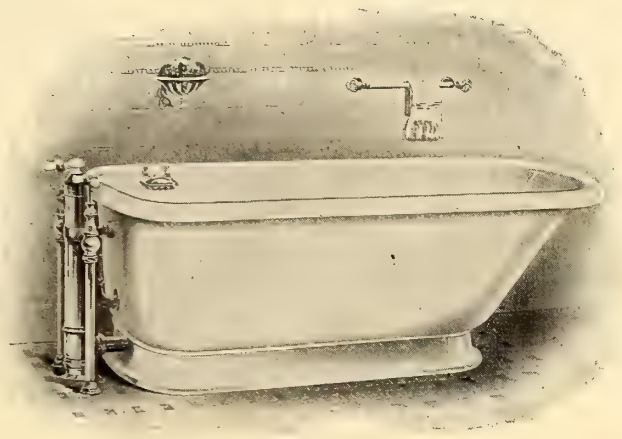

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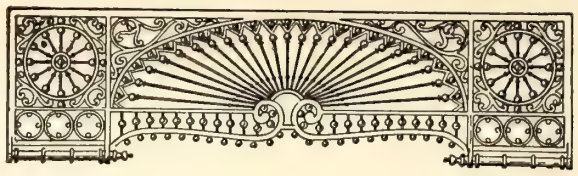

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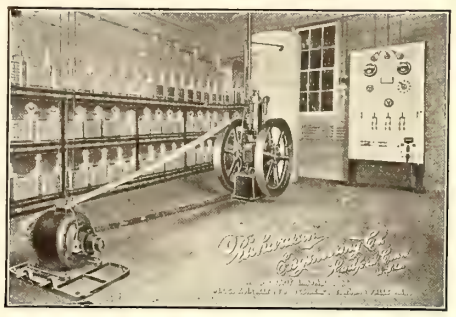

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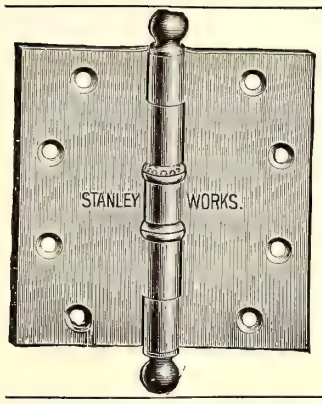

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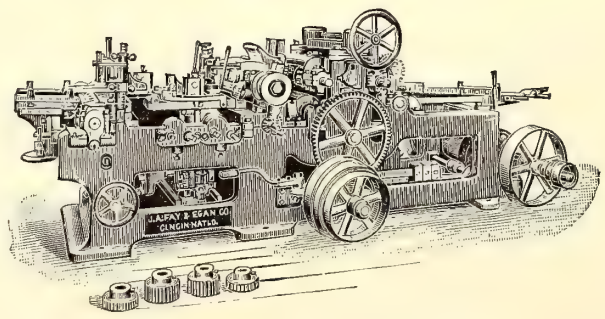

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who could not appreciate the wonderful advantages of city existence. The fact is, it was exactly because city life was existence and country life was living that they left, left gladly and freely, and were wise forerunners of one of the most remarkable population movements of modern times.

Are the delights of the city, then, only artificial? It would seem so, for otherwise how is it possible to explain the many defections that have taken place? If the satisfaction of living in the city was real and solid, surely those who have tasted of this bliss would not voluntarily withdraw themselves from it and hie themselves to the country? Yet this is what is happening now and happening daily.

The reasons for this change of feeling are not hard to find. The cities are more fascinating to-day than they ever were. They contain more things to see. They have larger and more beautiful buildings; they have fine parks; they have many places of pleasure and delight; they boast the finest possible shops, and the doings in their theaters are solemnly chronicled in a jealous press as matters of supreme importance. City life is richer and fuller than it has ever been.

Yet all these things are participated in at heavy cost. It is scarcely fair to take New York city as the type of the American city; yet it stands at the top of the list as our largest city and the most developed. It has already become a truism that, in a very few years, only two classes of people can live there—the very rich and the very poor. The reason is obvious. The very rich will alone be able to meet the excessive cost of home building, and the very poor must content themselves with the wretched accommodations provided by tenements of a poor sort—property often vastly profitable to its owners because as little care as possible is taken of it.

The medium class, therefore, is thrust out into the suburbs and the country simply because it can not find accommodations for itself within city limits. Hence the great suburban expansion which characterizes all our cities, large and small. It has become a necessary feature of city growth, and since these people work in the cities and are thus associated with them, it is a new form of city life, the latest and the most modern.

"Better houses for less money," is the motto of the suburbs! "More land at less cost," is the keynote of the success of the near-by countryside! Yet the American appetite for bargains is by no means the sole cause of the success of country living for city folk. Those going out have found a fresh and new delight in country life which is as rare and as fascinating to them as the new pleasures of the city are to the countryman when he first comes to town.

A whole new world is opened up, the finest possible world, a world of gentle pleasure and of quiet joys, a world of peace and of delight, a world that it is pleasant to see and to live in. The city man has but to know this world to realize that the utmost joys of the city were artificial, feeble, inane and insufficient. He no longer views the countryman with contempt, but learns that he has been the wiser man, having more at his doors than could be bought within the town, and getting more from life than the most crowded thoroughfare could give.

But the two classes of residents have no need to view each other with contempt. Taken rationally the city will give to those who use it properly all the rationable enjoyment they need, exactly as the country approached in the proper spirit will yield to those who live there its utmost fruits. But the city is apt to intoxicate one by the very fulness and variety of its life, while the country may deaded through surfeit of evenness. It is not given to

every one to content himself in the city, and it is surely not every one who will be satisfied with the country.

Modern conditions of life are such, however, that not every one can choose whether he will live in the city or in the country. Most of us have to live where we find work to do, and our place of residence is governed accordingly. Work, opportunity, labor—these are the first considerations; the place of living comes after; that is, the particular kind of a place, whether a house, an apartment, a tenement, an hotel. These two things hang together, and whatever one does in life is dependent upon them and is determined by them.

In the various transpositions to which modern urban life has been submitted nothing is so important as content. The person who is dissatisfied with the country can never be content there. The person who does not like the city will never be content there. And unless one is contented with one's place of abode one will always be discontented, unhappy, dissatisfied. There is no secret in this, no hidden force, no mystery. It is a plain, simple, unvarnished fact.

And it is a great fact, a fact that must be recognized by every one moving from the city to the country perhaps to an even greater extent than by those coming into town from without. The man and the woman who have been accustomed to city living will find a totally different kind of life awaiting them in the country. They must be content with this, or prepared to be content with it. They must make up their minds to like it and not to look back with regretful thoughts to the gayer and more fascinating times they may have had in town. The country can not compete with the city in the same way. What the country has to offer is something of its own, something so preciously its own, that it can not be considered in the same thought with the city for a moment.

The city offers an immense variety of attractions. So does the country. But neither the variety nor the attractions themselves are identical. They are so completely different that one who must have the city attractions can not possibly be satisfied with those of the country. Yet there must be this satisfaction, and an abundance of it, or there will be dissatisfaction which even the most splendid abode and the most ample opportunity for enjoyment of country pleasures will not lessen. Content with the country is the great factor, the only factor, in the success of country life.

FIFTY SUGGESTIONS FOR THE HOUSE

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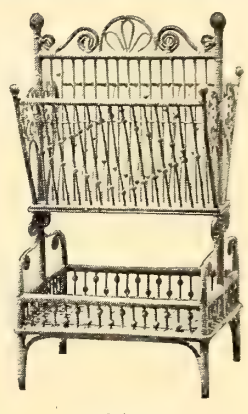

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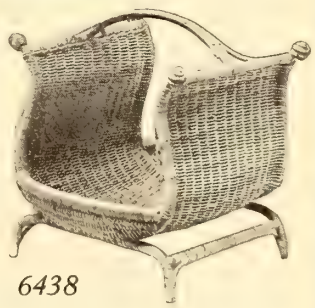

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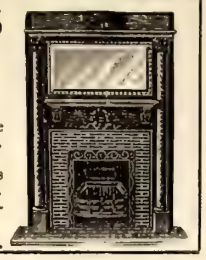

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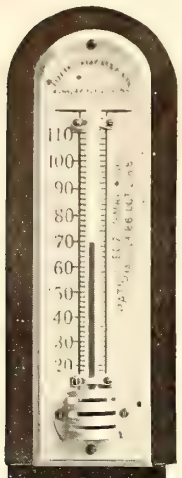

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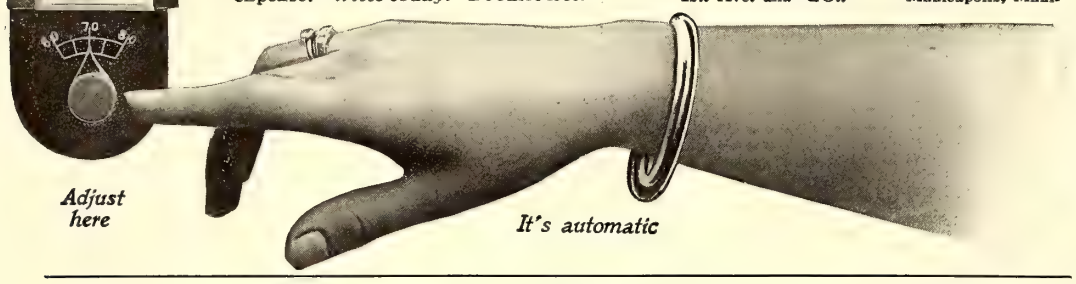

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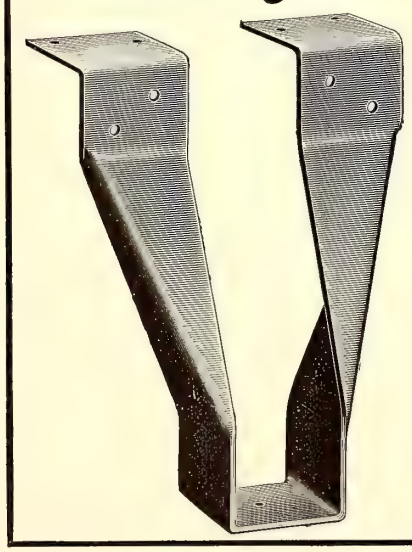

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In choosing a color for mantel drapery, that of the wall and of the hangings must be taken into consideration. If with dark walls and a black marble fireplace a light color is introduced, the effect is that of a light streak breaking the line of the wall. Then the decoration becomes too obvious, and loses such little quality as it might have been made to possess. It is better to build up from the lower or the floor color, making the covering as inconspicuous as possible.—Lillie Hamilton French.

20. The Shingle Roof

Shingles are not disposed to break by shaking in the wind, or by being nailed too tightly, and form, so long as they last, a much better roof than slates; but they soon rot in the "valleys," or angles between intersecting portions of the roof, and inferior shingles may split or curl in the sun, also causing leaks.—T. M. Clarke.

21. Water Marks on Tables

The best way to remove marks made by hot water jugs on polished trays or tables is to make a thin paste of salad oil and salt, leave it on the mark or ring for half an hour, then polish with a dry cloth and the mark will have disappeared.

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English Table Glass

English Table Glass. By Percy Bate. London: George Newnes, Limited; New York: Charles Scribner's Sons. 1905. Pp. 130. Price, $2.50 *net.*

The series of books now being brought out under the general title of "Library of Applied Arts" by George Newnes, Limited, of London, and published in this country by Charles Scribner's Sons, fill a vacancy in artistic literature that has long needed filling. Dealing with specific topics of somewhat limited range, they constitute, in most cases, convenient text-books which, if not the only ones on their subjects, are certainly the most useful and the most accessible. The scheme is the very admirable one of condensed text and abundant illustration. That the text is somewhat elemental in scope necessarily follows, but the illustrations are much more numerous than are usually found in books of this description, and the volumes as a whole are very welcome aids in disseminating information on topics of which comparatively little has been written.

This discloses the second point of value to be noted in this series, for the subjects thus far treated are unique in books of this kind. They are subjects which, if not new, are new in books of this size and cost, and the collector and student of the minor arts will here find the present knowledge of his subject presented by specialists in a sufficiently complete way to satisfy all but the most exacting.

Mr. Bate's book is not only a very good type of the series, but a very good book in itself. He frankly admits his obligations to Mr. Albert Hartshorne, whose monumental work on "Old English Glasses" was published in 1897, but his book is an original survey of the subject, and is illustrated most abundantly with glasses from the author's collection, and from that of Mrs. Rees Price. Some few glasses are illustrated from other sources, but most of them are from the collections named. The illustrations number, all told, 254, and are sufficiently numerous to very fairly illustrate the whole subject of English table glass in its best period. All these glasses are re-

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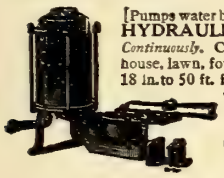

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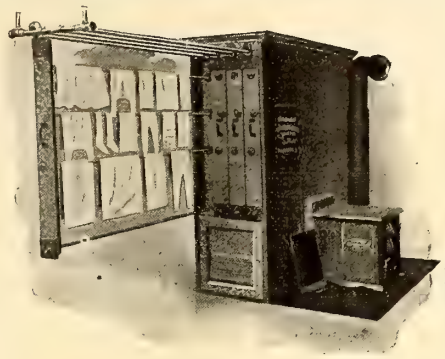

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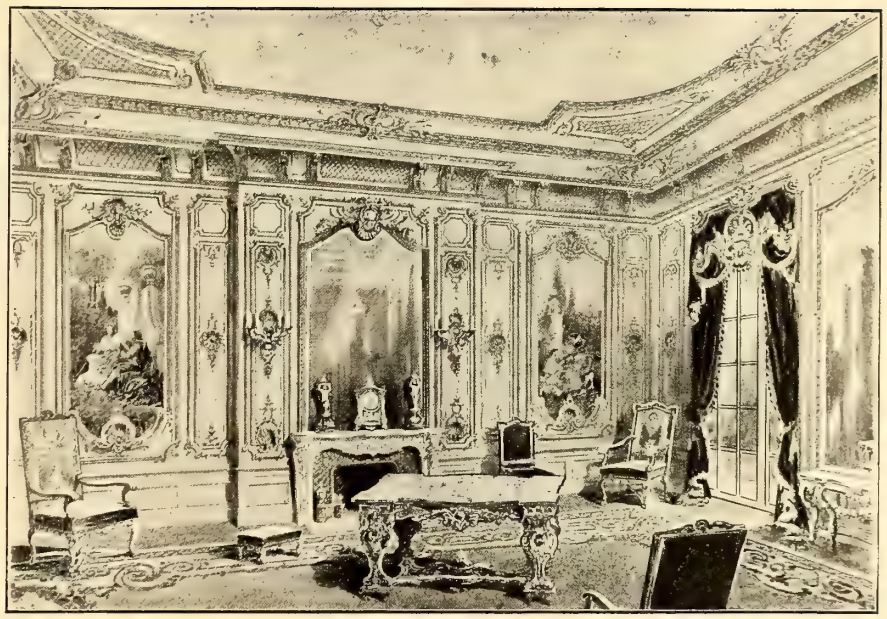

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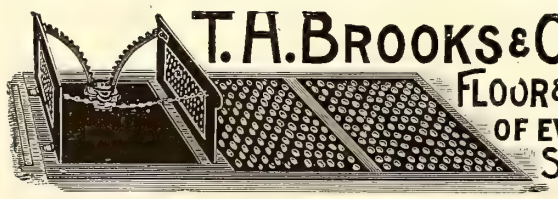
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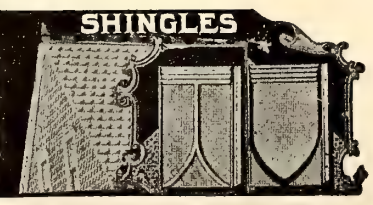

produced by photography in an admirable manner.

English table glass is practically an art of the eighteenth century. Few glasses of the sixteenth and seventeenth centuries have survived to our day; the earliest known glasses of English origin are but three in number and date from the reign of Queen Elizabeth. It is probable that these were exceptional examples only, and Mr. Bate begins his subject, therefore, with glasses made in England between 1670 and 1700. Discarding any elaborate system of classification, he groups the glasses of the eighteenth century into five classes, basing his classification on the stems. Arranging these in chronological order he has: 1. Baluster Stem; 2. Plain Stem; 3. Air-twist Stem; 4. White-twist Stem, and 5. Cut Stem. This is a general classification only, for there are, of course, many variations, overlappings and offshoots.

In the earliest group the under edge of the foot is turned or folded back on itself all round, the fold being from a quarter to a half inch wide. In the center, where the workman's pontil was snapped off when the glass was completed, is a rough and sharp-edged excrescence. This folded foot is highly characteristic of the first three classes, but is very rarely found with white twists or cut stems,

In the feet of the second class the fold has been abandoned, but the rough pontil mark is retained. In the third the pontil mark has been polished away on the wheel, leaving a very smooth, saucer-shaped depression.

The bowl, as well as the stem, has been the means of classifying these glasses, and Mr. Bate adopts Mr. Hartshorne's classification of this kind, supplementing it with some further shapes from his own observation. From this point of view glasses may be classified as drawn, bell, waisted bell, straight-sided, straight-sided rectangular, ovoid, ogee, lipped ogee, double ogee, waisted.

With these preliminary observations, the author proceeds to describe the various kinds of glasses—wine glasses, ale and other tall glasses, goblets, rummers, cider, dram and spirit glasses, candlesticks, decanters, sweetmeat glasses, trailed pieces and others—while short chapters are added on methods of decoration, frauds, fakes and forgeries, inscribed and historic glasses. A brief note on foreign glass is added as a necessary supplement. The information given as to the dates of glass is somewhat scanty, and is the one aspect of the book that is most open to criticism. But it is thoroughly interesting as a whole, and an excellent guide to the subject of English table glass.

The Orchard and Fruit Garden

THE ORCHARD AND FRUIT GARDEN. By E. P. Powell. New York: McClure, Phillips & Co., 1905. The Country Home Library. Vol. II. Pp. 15 322. Price, $1.50 *net*.

Mr. Powell does not believe in a useless or ornamental country life. He is a thorough believer in the utility of country existence. Beautiful as the land is to look upon, it is to him more beautiful when it is put to some goodly purpose which requires the care and attention of the landowner, and which excites and commands his interest. And he is quite right in this contention, particularly with the city folk who retire to the country for rest or who are forced thither because of the exceeding altitude of city rents and values.

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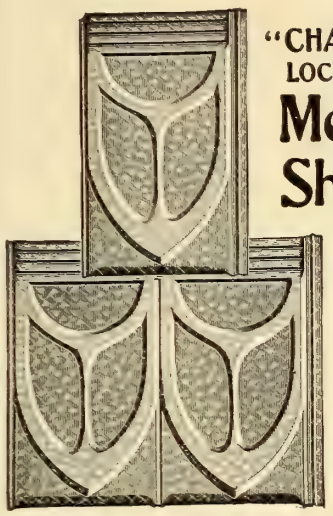

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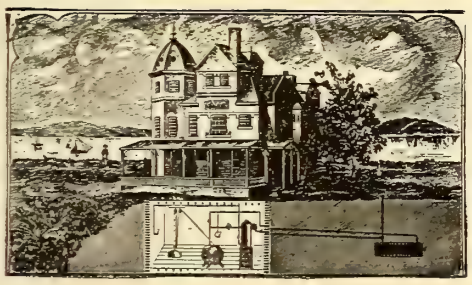

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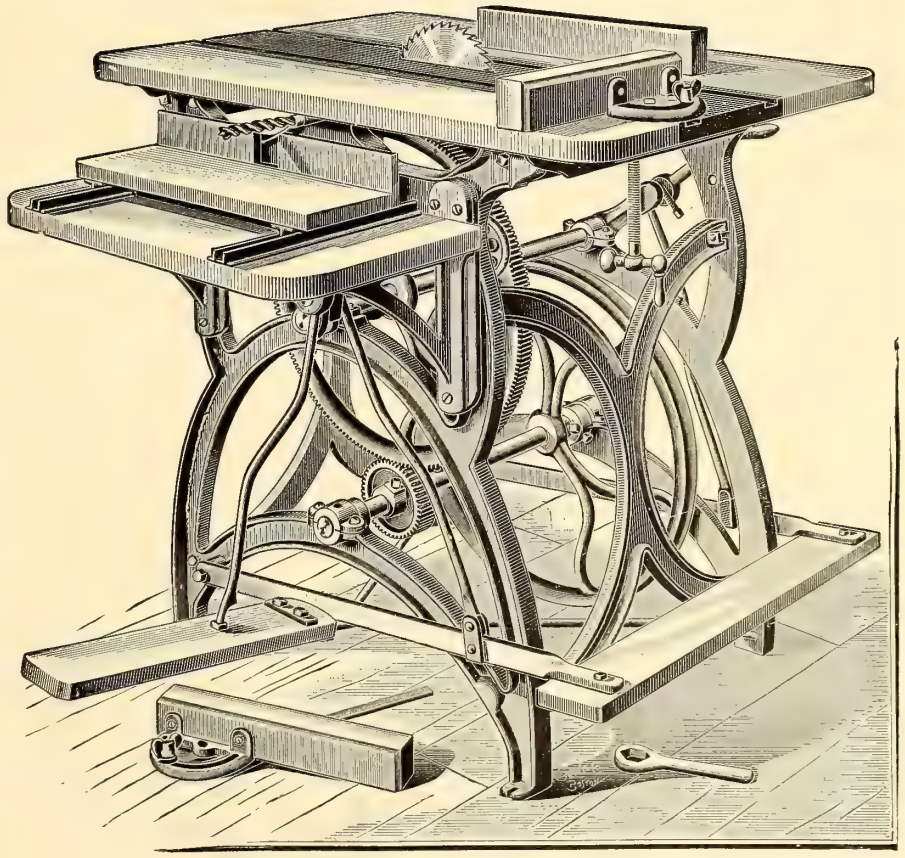

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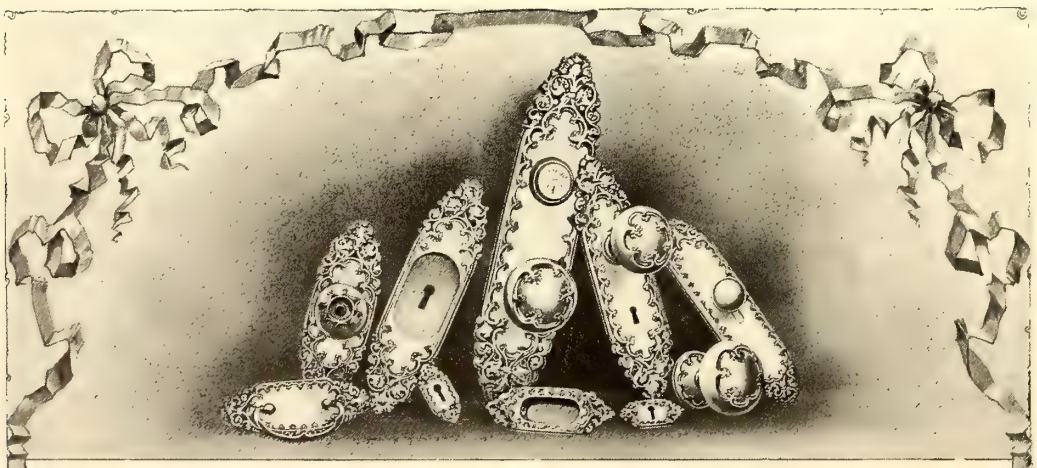

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activity of the town, the quiet of country life threatens to pall upon him and to render his second state much worse than his first. Mr. Powell's remedy, and a most effective one it is, is country activity and country interest. One must know the soil and love it; one must work upon it and make things to grow on it; one must, if one can, derive an income from it and make it "pay." And there is no more absorbingly difficult enterprise than the latter, as every one who has tried it is aware.

Hence he begins his book with the sentence "Every landowner should be a fruit grower." His book is an elaboration of this idea. It does not pretend to be an exhaustive treatise on orchard fruits and fruit gardens, but it does aim to be a thoroughly reliable book for those who are establishing their homes on the improved basis of intensive culture and especially to assist those who are escaping from the confinements of city life to the freedom and luxuries of suburban homes. These are excellent purposes, and as the author is able to draw on an extended personal experience, as he represents and illustrates in his own person the very class of people his book is intended to help, and as it is based on wide, practical knowledge, it is a book of great value, exactly the kind of a book the people for whom it is intended will want to have. And it is a book they will need and which they will prize most highly.

It is divided naturally into three parts. The first treats of the orchard, and includes separate chapters on the various fruit trees, on grapes, on figs, dates and olives, on tropical fruits, undeveloped fruits and on nuts and nut trees. Mr. Powell does not undertake to describe and name every sort of fruit under these many heads, but he notes a very great variety of each, describes them briefly but concisely, and tells what are the best sorts to plant. He tells how these trees may be grown, what soil they prefer, and notes their habits with great minuteness.

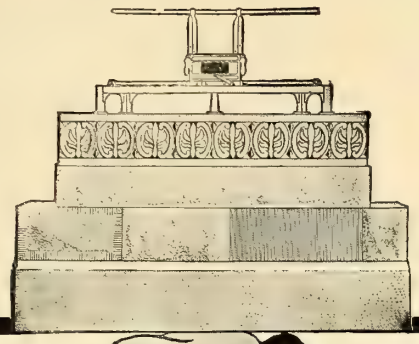
The second portion is devoted to the fruit garden. Here he takes up the small fruits in much the same general way that the larger varieties are treated, and gives the same useful practical information concerning them. He is careful to warn the fruit grower, however, of the great amount of care and attention that will be required in this department. But admitting such sacrifices will be made as are required, he writes enthusiastically on this important part of the home garden, and his pages are laden with helpful valuable suggestions.

The final portion is concerned with cultural directions. It treats of many important subjects, including wind breaks, drainage and irrigation, pruning, mulching fertilizing and cover crops, spraying, bees, birds, fowls and animals in their relation to the orchard and fruit garden, harvesting and marketing, and a final chapter on plant breeding. The illustrations include views of trees, fruits and general views. It is a book of sterling value and of real importance and help to every orchard owner and possessor of a fruit garden.

The Amateur Rose Gardener

THE AMATEUR GARDENER'S ROSE BOOK. By the late Julius Hoffmann. Translated by John Weathers. New York: Longmans, Green & Co. 1905. Pp. 16+155.

Dr. Hoffmann's book represents the results of a lifetime given to the cultivation of the rose. Written by a German gardener for German use, it has been translated by an Englishman and offered for the guidance of rose growers in the British Isles. Mr. Weathers has not, however, made any alterations or changes in



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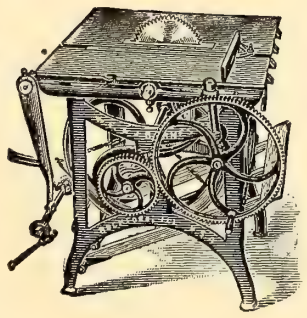

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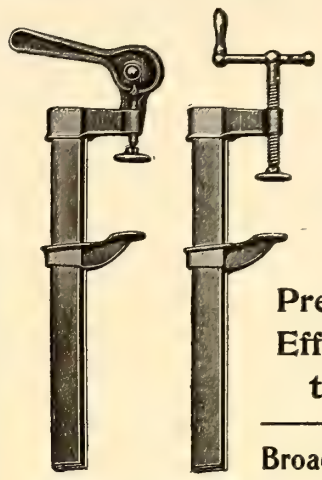

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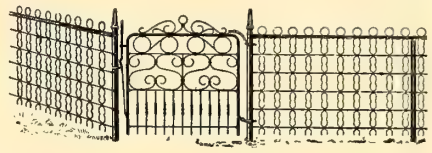

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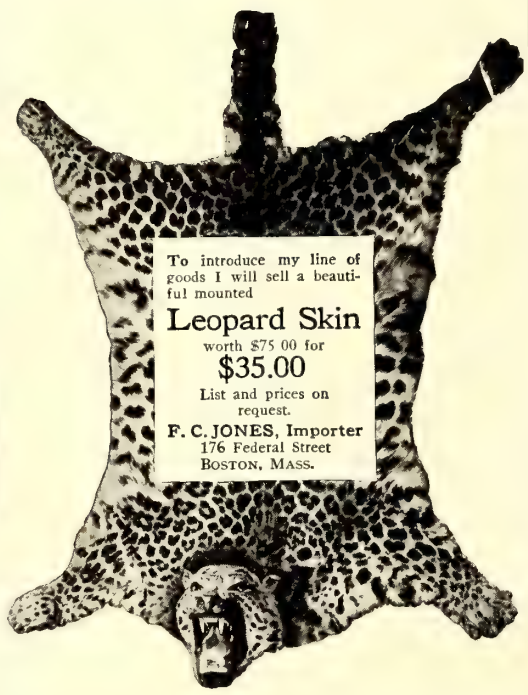

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the original text, save adding a number of new English roses to the very extensive and valuable alphabetical list with which the book is concluded. The adaptation of such a book to American conditions is much more direct than may at first be obvious. As a matter of fact, the conditions of rose culture in America more nearly approximate the conditions that obtain in Germany, where the winters are more rigorous than in England, than do those of Great Britain. The book has, therefore, a special value to American rose growers, being thoroughly complete, very careful and fully detailed in its information, and presenting every aspect of its fascinating subject from the point of view of the practical grower. It is illustrated with twenty lithograph plates, reproducing as many roses in natural colors from drawings by Hermann Friese. These plates are somewhat hard and formal in drawing, but are very careful reproductions of the actual flowers, and add greatly to the value and interest of the book.

The book treats of the state of the soil and its improvement, manuring, planting, pruning in autumn and in the spring, bending down roses and uncovering them, the choice of stocks and their treatment, budding and grafting, classification of roses into groups, like Tea Roses, Hybrid Perpetual or Remontant Roses, Climbing Roses, etc. Various operations and methods of cultivating, such as the raising of seedlings, propagation by cuttings, grafting under glass, pot culture, production of new varieties and similar topics are treated at great length and presented with every necessary fulness. The alphabetical list is of special interest and value, giving the common and scientific name of every variety described, together with concise information as to its habits and parts.

Dr. Hoffmann—who unfortunately died before the book was completed—presents his subject in a continuous study. He treats of roses from their beginning until their fruition in full bloom. He tells how they grow and under what conditions they do best. He sums up, in fact, all knowledge necessary to the successful growing of roses. The book is a complete treatise, and while written originally for German growers, should greatly extend the art of rose culture wherever it happens to be known.

English Trees

WAYSIDE AND WOODLAND TREES. A Pocket Guide to the British Sylva. By Edward Step, F.L.S. New York: Frederick Warne & Co., 1905. Third Impression. Pp. 182. Price, $1.75 *net*. Mailage extra.

The purpose of this volume is the humble but praiseworthy one of affording a straightforward means for the identification of the British native trees and larger shrubs which would be convenient for the rural rambler and nature lover. As the author states, the list of British arborescent plants is a somewhat meager one, but he has supplemented his record of native plants by a list of those exotics that have long been naturalized in Great Britain, together with some of more recent introduction that have become conspicuous ornaments in public and private parks.

This is a commendable and useful programme, and has been followed out in a painstaking and clear way. The book is a small one, intended for pocket use, and of a size admirably fitted to such use. It is illustrated with no less than one hundred and twenty-seven plates from original photographs, together with numerous figures in the text. It is, therefore, a well made book, admirably setting forth the exact information it seeks to convey, and the illustrations are abundant

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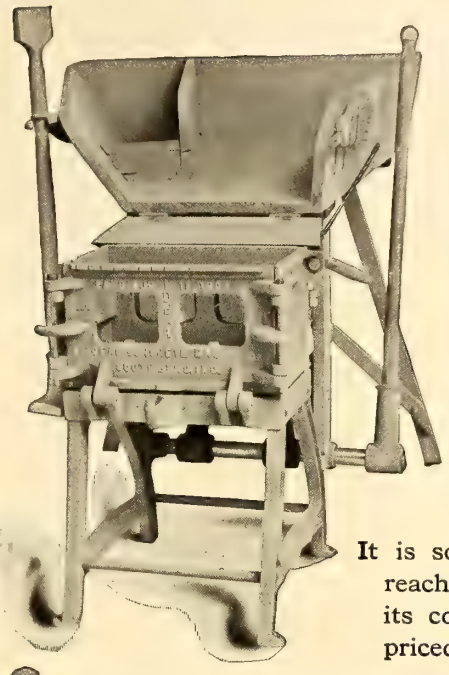

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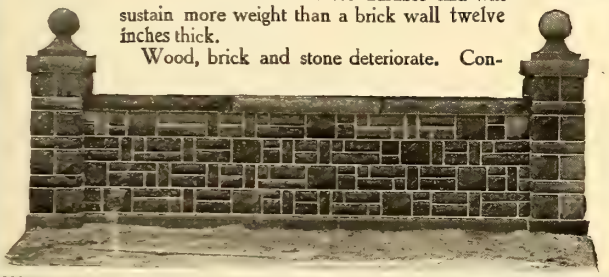

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enough to completely illustrate the text. The deciduous trees illustrated are exhibited in two states, in summer and in winter, the illustrations of the two seasons being of the same tree. Many of these general illustrations are supplemented with other photographs of the bole, which exhibit the character of the bark, and which are offered as an aid to the identification of the species.

The scheme and plan of this book are thoroughly excellent and have been well developed. The text covers most of the points a lover of trees is likely to need, and the illustration scheme is so well worked out as to give the pictures a distinct value in themselves.

PUBLISHERS' DEPARTMENT

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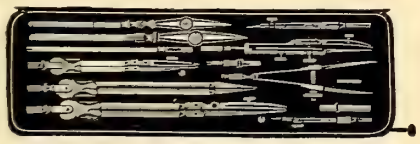

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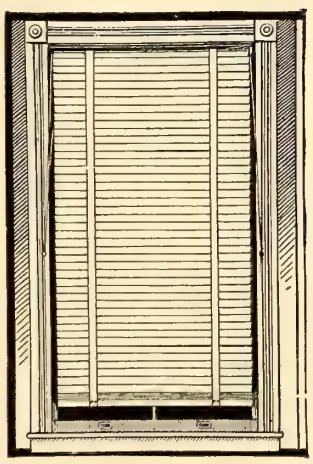

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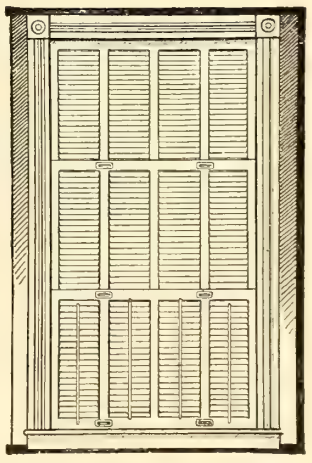

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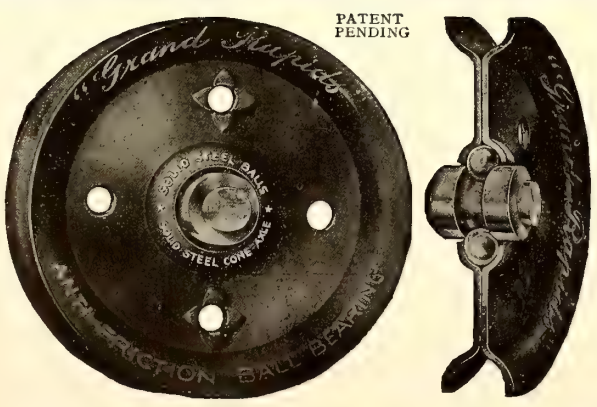

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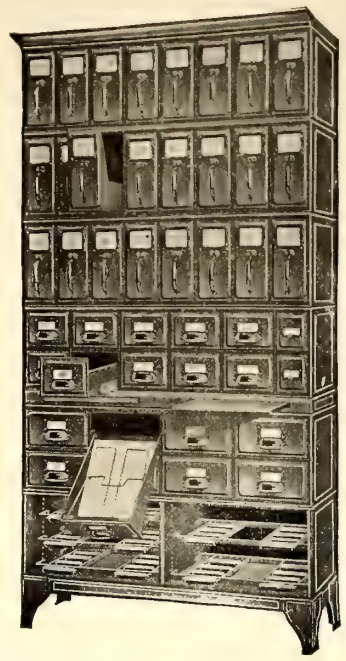

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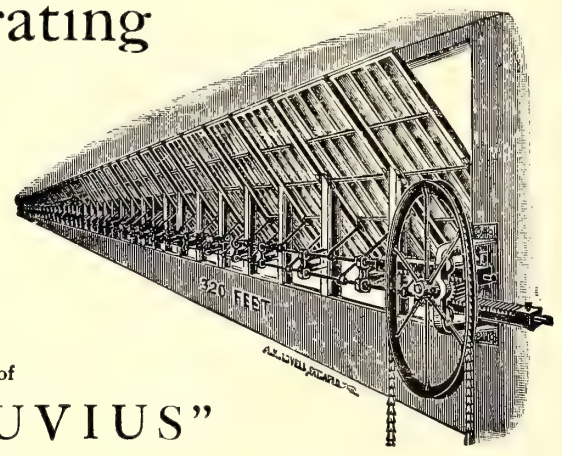

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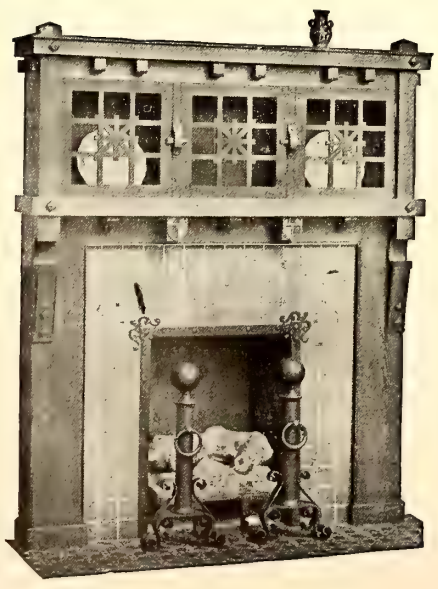

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Hollow Concrete Building Blocks

AS ONE feature after another of the practical side of the concrete block industry becomes familiar to the world, considerations are bound to be applied to the artistic points of the material used. When a product possesses the qualities that render it as cheap as brick, as handsome as limestone and as durable as granite, the observational faculty is primed to deal with appearances—its remaining virtue. The question of usefulness, durability and economy can not be favorably answered, if the material does not please the eye. Until it does, it will not be in the class of those creations that are able to stand out and bear themselves up in architecture above the level of the ground. Concrete blocks made by a well-known process have been used in office buildings that are thought to be the finest structures of a town, and in the case of commercial rating able to bring the largest rentals. The Rose Dispensary Building, Terre Haute, Ind., built seventeen years ago, and in absolutely perfect preservation, is an example of this claim. A church in Houston, Texas, is built entirely of concrete and mostly of hollow concrete blocks, and on the score of looks alone will make the observer share our rosy optimism in the conviction that the effect has there reached the height of rivaling much pretentious architecture. Railway stations, institutions, residences, barns, factories, cottages, entrances, etc., furnish a variety of proofs of efficiency gained by the choice of these blocks. They are made by the Pettyjohn Company, Terre Haute, Ind., by a method of molding which prevents the formation of those invisible cracks which are liable to break after a building is up. In using the Pettyjohn machine and process, the machine and not the block is moved, and in this way all possibility of having blocks injured or damaged by carrying off, moving or disturbing before the cement is set is entirely avoided. When molded in the form of hollow blocks with a rapid and up-to-date machine, and with the present low price of cement, it can be put upon the market at a cost that will place it in competition with all building materials, even including lumber. Any attempt to get away from the artificiality of the present cut stone designs must comprise two very radical departures from the usual methods. First, the abolishing of the iron face-plate and the substitution of face-plates that are in themselves granular in texture; and, second, the block must remain upon or in contact with the face-plate until it has set, thus preventing any possibility of the surface of the block sticking to the granular surface of the face-plate. This is just what the firm has done in producing the Pettyjohn facing model. This machine uses a chemically prepared and waterproofed concrete face-plate in the bottom of the machine. These plates are cast directly from natural cut stones, and the blocks molded from them are thus an absolutely perfect reproduction of the natural stone original, and, of course, may be made in unlimited variety of design, size or shape, not to mention coloring or stratified effects. The blocks, after being made, remain upon the face-plate for twenty-four hours or more, or until

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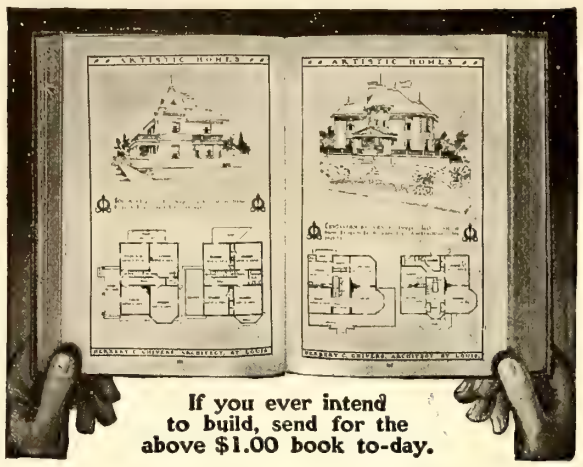

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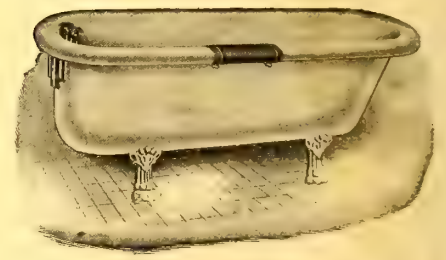

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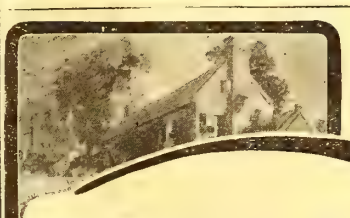

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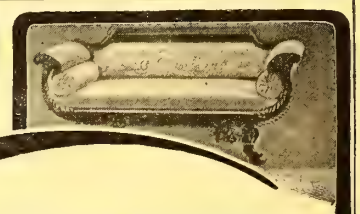

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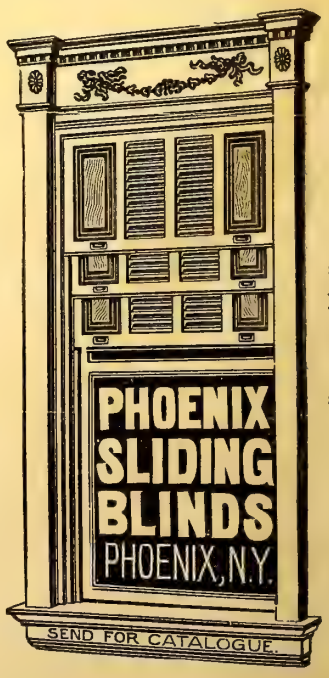

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NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be enclosed for postage if the writers desire the return of their copy.

The Stone Tower and the Bridge of "Glenn Elsinore," a New England Estate

INDEXED

AMERICAN HOMES AND GARDENS

Volume I December, 1905 Number 6

"Yaddo"—A Semicircular Bay of Rough-Faced Stone Surrounded by a Balustrade Forms a Mid-Observation Point from which the Rose Garden below Can Be Seen. A Pompeian Table in the Bay Carries a Sun Dial

Monthly Comment

THE money expended by American cities for police protection aggregates a vast sum. That devoted to this purpose by any one of the twenty largest cities is itself immense, and the total amount spent in this way is prodigious. A very reasonable question for any taxpayer to ask is, is full value received for this money? The answer is unquestionably determined by results. If the police give genuine protection—if they detect crime, if they inspire criminals with fear, if they protect property, if they help to make life safe and property secure, if, in fine, they constitute a useful part of the civic government—then surely they are of value, and the money they cost is money well spent.

IT is a singular fact that most citizens are extremely skeptical as to the value of the police. Larger and larger appropriations are given to this department of city government every year. In private affairs such expenditures would result in one of two things: either greatly increased efficiency or insolvency and collapse. The police departments certainly give no indication of collapse, but grow stronger and stronger every year, demanding and receiving greater annual appropriations and, in many ways, strengthening their hold on the public and the public purse. This would not be criticized if, at the same time, the police grew in public estimation. No American city spends so much for its police as New York. If the money cost were an indication of efficiency it would be the best protected city in the United States. Yet in a single month upward of a hundred cases of robbery in apartment hotels and buildings of like character have been reported, and it has been estimated that in the past year at least $300,000 was stolen from such buildings. Reports from other cities show that the same kind of crime is greatly on the increase everywhere. In too many instances it is apparent that liberal expenditures for police service do not yield a satisfactory return in arrests.

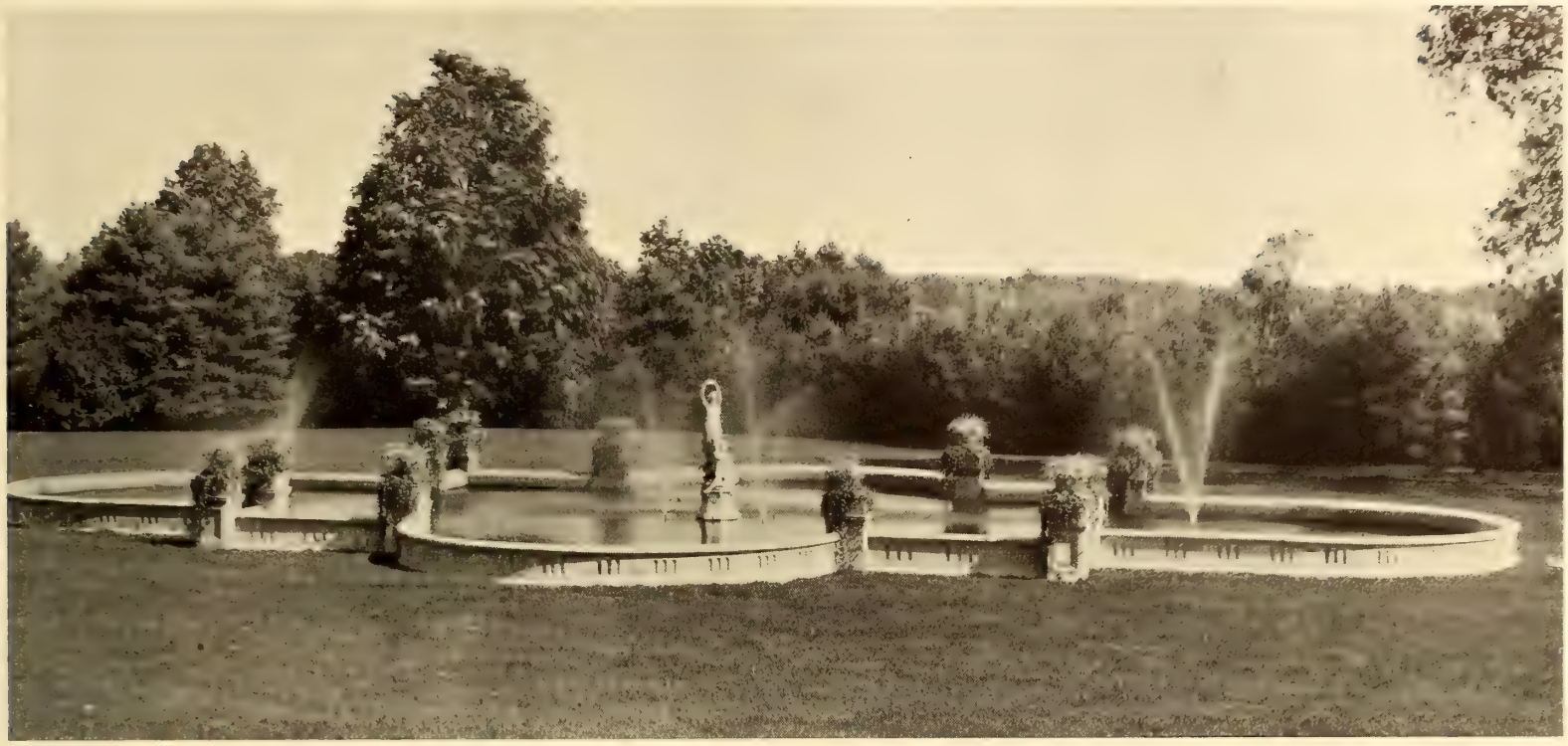
IT is an excellent plan to avoid hysterics in architectural matters. Do not regard every good piece of architectural work as a " triumph," or a " miracle," or a " marvel." It is an architect's business to plan and execute good work. That is what he is for. Some architects can do better work than others; some have better native taste and skill and more of it; some have made better use of their opportunities, studied harder and applied themselves more keenly to their work than their professional brethren; some, undoubtedly, are very bad indeed, and have no place—no right place—in a profession concerned with the erection of permanent buildings. But the business of an architect is to do good work, and when he does it, it is exactly what he is expected to do. It may be beautiful and fine, it may be good and excellent, but it is seldom a " triumph," and rarely a " miracle."

HOME making and housekeeping are two different things. Both are related to each other and both are essential to existence, but the successful housekeeper is not necessarily a successful home maker. The housekeeper has to do with the material things of life, with the conduct of the household, with its cleanliness, its order, its external visible aspect. The home maker is concerned with the internal side of life, with things invisible and personal. It is nobler work, that of home making, than that of housekeeping. The housekeeper is an executive officer, directing her servants as a general commands his army; her duties are business duties and her life is full of bustling activity. The home maker is concerned with the quieter side of life. She may fail in the executive aspects, but succeed with exceeding beauty in the personal matters which make the home the most precious of human possessions.

THE housekeeper is a single person, intent on keeping her house in order, administering it with economy and carrying on her work with as little friction as possible. Many persons, the whole family group, constitute the home makers of any household. The woman leads in home making, exactly as she dominates in housekeeping, but the responsibility for the home is not hers alone, but is equally the husband's, and, to a very considerable extent, the children's as well. Every one must help in home making, each one contribute his quota, each do what he or she can. But the men should not put the whole responsibility on the women, nor the women put it off on the men, nor the children hold the parents entirely responsible, nor the parents ignore the children's part. The home must be a perfect organism, in which each one tries to do the best he can for the others. If he helps himself at the same time he is so much the better off. But home life rests more completely on consideration of others than on any other single thought.

THE amount of unnecessary noise generated, produced, developed and thrust forth upon a helpless populace in any city is completely without warrant, meaning, value or utility. In no place in the world is there less need for noise than in a town. There communication is more rapid, direct and secure than in the open country. There is an abundance of people alert for information, ready to work and anxious for personal advantage. They can communicate their ideas without difficulty, get all the work they want without noise, perform their labor quietly, and go home at night to peaceful repose. As a matter of fact, there are few things more difficult to do than this. The rumble of the elevated trains, the shaking of the earth by the underground, the clanging of the bells of the cable and trolley cars, may be more or less necessary and more or less unavoidable. It is not the necessary noises which are so horrible in the cities as the unnecessary ones. And of the unnecessary ones there is little abatement. If our modern life produced genuine reformers, people intent on doing good for the sake of doing it, many of these things might be remedied. As it is we are going from bad to worse. Many noises can not be avoided in places where great crowds of people are continually congregated, but every unnecessary noise should be utterly abolished from town life.

STYLES and fashions in furnishings and furniture are much less important than excellence. The newest things in furniture, and, indeed, in all matters of interior decoration, are often of interest because the modern purveyors of such things turn them out with a certain knack and charm; but their merits are apt not to be very deep, and it is always exceedingly wasteful to throw away good old things for new objects that are simply in the fashion. Furniture fashions change so rapidly nowadays that any room furnished in the newest type is out of date the next season. Few pocketbooks can stand yearly changes in furnishings which are not only unnecessary but exceedingly wasteful. A good, average style is often a better investment than the newest of new fashions.



At the Foot of the Lawn is a Huge Fountain, in which Gold Fish and Carp May Swim

Notable American Homes

"YADDO"

Its Gardens and its Grounds

By Charles de K. Wentworth

"BEFO' the wah" Saratoga was the fashionable watering place for New Yorkers and held its own until Newport took the glory from it. The curative properties of its many springs were taken more seriously then, and the presence of a large contingent from the Southern States made the crowd of visitors more varied and interesting than it became later, when the Civil War interfered with the northward summer migrations from Virginia and beyond. But of late Saratoga has come into favor again and many are drawn to the town which has experienced within half a century such ups and downs. Some, perhaps, seek for an explanation of what it was that furnished the attraction and brought together Canadians and Southerners, New Yorkers and Kentuckians, every summer for two generations.

A first visit to "Yaddo" was somewhat in the nature of an accident, since I found my way to it rather unexpectedly on the occasion of a morning's walk. I well remember it was hot—as this old battlefield of the British troops and Colonial levies often can be—and I had no longer to solace me the shade of the trees that grew in fine style down the center of the avenue. There were woods on my right, young woods, with taller trees peeping beyond them, trees that tempted one to explore their shady bosquets; the more so because a gateway stood invitingly open, whence I caught a glimpse of a cool aisle of road with a bend that asked one to find out whither it was going. I remember the first note of interest I came upon was a charming little lake with whispering grass at its shoal end and trees overhanging the bolder banks. The road skirts this lake, turns into the forest, comes back to a second and larger lake, over which hangs a round tower, built of boulders, with arched openings below its conical roof. That tower and the rough stone coping of the road as it swept around the lower end of the lake gave one pause. The turn brought one before an arch of massive stones, which carried the driveway southward and separated one of the four successive lakes from another still farther down.

Not far off I came across the owner of this domain, clad in corduroys and golf trim, giving orders to a gardener near a clump of rhododendrons. It was characteristic of the thought and care that has gone to the making of this great estate that its owner should, at midday, be thus engaged in a distinct and quiet spot, intent upon personally directing a comparatively small matter. At the very beginning of our talk he explained to me that "Yaddo"—and, indeed, it was almost my first thought—was not, as I had supposed, a local Indian name, but was one given the place, under special circumstances, when the present owners first came here and long before the present house was built. Taking it from childish lips, it began to be used at first in sport, then adopted in earnest. It is short and convenient for general use, and is consecrated to its owners by memories which belong to them alone.

The little lakes hidden away in the trees mean everything in the pleasure we get from "Yaddo," not alone because of their picturesqueness, but their practical value. They are ice makers and pure water providers, and in winter are skated upon with protection from the wind.

Strolling along the driveway, which zigzags on easy gradients up a rather steep incline, we came to wide slopes of greensward and caught a glimpse of the mansion, its square tower of rough-faced gray stone and broad stone terrace suggesting Elizabethan architecture, which the extension in half-timber does not belie, nor the octagonal smaller tower that

advances a little before the facade, nor the carved wood portions of the front. The tower represents the center of this original house in more than one respect. It provides for two great central halls on main and upper story, and above that rooms with superb outlook. In the old country this would represent the original tower of stone into which family and movables were bundled when a raid was coming. The extensions north and south would represent the additions made after the coming of more settled times. In the adapted form its two broad, high-ceiled halls make a meeting place on each floor. That above is a lounging-room with tables, books, easy chairs, loggia to the west, broad outlook to the east. That below is an assembly room for arrivals and departures, for games before the great fireplace, for pageants on Twelfth Night or Christmas. Into it open the wide doors of drawing-rooms and dining-room, and there descends the great double stairway. To the west is the little conservatory and fountain, to the east the tall, wide window doors that lead to the terrace. In nothing does " Yaddo " bear the marks of a home all the year round more clearly than in its orientation, for the dense pine woods to the west and north diminish the force of the icy winds, while the terrace turned to the east gets all the morning sun, with the added protection of the house at one's back. Here the outer wall is tapestried with Virginia creeper and other vines, and the flower boxes at the foot of the wall glow with seasonable blossoms. As one turns from the house and allows the gaze to sweep across the vast plain in which Saratoga Lake is lost among the undulations of the ground, the sharpest accent is given by a giant pine tree leaning at an angle with the slope on which it stands, the last of a mighty forest that grew here when the settlers pushed eastward from the Hudson and westward from New England. Fortunately this tree was spared by the farmer whose land Mr. Trask bought. It is characteristic of many up-country farmers that they show a certain hatred of trees inherited from the earlier settlers who had to do battle against the overwhelming forest. One hears them apologizing for not cutting down the most beautiful oaks and pines on the plea of overwork or laziness! As luck would have it this pine escaped, either because it seemed too heavy a job to undertake when plenty of smaller trees could be managed or because its owners really felt its lonely majesty and beauty. Now it gives a character to the landscape not easily defined.

A Glimpse of the Façade and the Terrace. The Outer Wall is Tapestried with Vines; Flower Beds Flank the Walk

Mr. Trask and his poet wife have the roots of their existence deep in this fair and smiling estate as the great pine pushes its roots down into the whilom pasture, now a stately rose garden. The farmhouse fell, to make room for a country seat, and that house in turn disappeared in the flames. Then it was that the present structure rose. Meantime other acres were acquired to the north across the highway, to the west beyond the pine forest toward the race track; to the southward, too, and lower down into the plain to the eastward, so that in the course of time " Yaddo " has become an estate of seven hundred acres or more, with its pasture lands and arable fields, its mighty barns and model dairy, its woods and coppices. It has become a favorite drive for Saratoga, the well kept drives in all but the close neighborhood of the mansion being always open to the public.

" Yaddo " mansion does not keep its formal gardens in close proximity, but hides them behind screens of trees and hedges. Looking from the terrace one perceives a fountain far below, on the lower lawn, but only a bit of the rose garden offers itself invitingly. So, beckoned onward by the leaning tower of the pine tree aforesaid, one strolls, unprepared and drawn as by invisible threads of expectation not yet come to conscious curiosity, down the natural slope of the lawn; or, if it is hot sunlight, one edges over to a pleached alley that

Marble Steps Lead from the Pergola and the Terraces to the Rose Garden

The Mansion with its Square Tower of Rough-Faced Gray Stone and Broad Stone Terrace Suggests Elizabethan Architecture

A Sequestered Walk among Tall Young Trees near the Mansion

seems to lead that way by a short cut. Down this path are stopping places in the shape of open platforms that are in the nature of gateways, carrying classic roofs on columns, whose Ionic capitals and drums are of terra cotta, covered platforms fenced about with a simple Greek screenwork and for the leisurely provided with a bench and a bit of sculpture to look at. Thus does one part from that wilder and more natural portion of a garden that Lord Verulam demands as an offset to the primness of his day, and come, by steps and degrees, to the more ordered and formal precincts given up to the rose. On the well shaved greensward are great decorated pots of flowers and shrubs aligned on both sides of the graveled path. It is not until one has turned the corner, however, that one sees the terraces that overlook the rose garden. Backed by a grove of tall young poplars a pergola extends from north to south its fluted Ionic columns and open rafters clambered over by crimson ramblers. Marble short flights of stairs descend to a second terrace edged with the same stone, broad pots standing on the low piers to carry slender green cones of cedars. Out of this coping wall juts, in the center, a semicircular bay of rough-faced stone with balustrade, a kind of observation point from which one can examine the beds of roses down below. On the Greco-Roman table in this bay lies a sun dial, carefully designed for the latitude of "Yaddo," and one of the most perfect of its kind. Draw up a Pompeian chair, lean your elbow on the marble slab, inhale the myriad perfumes from the roses, and, taking no thought of time's finger on the dial in front of you, gaze off into the distance and try to follow along the low horizon line the faint undulations of the Green Mountains and the Hoosac Range.

You will be sure to turn involuntarily at last to the great pine tree, with its upward trending branches, that tells in its structure so plainly of a vanished forest. Near it, and against the belt of young woodland, is an exedra shining white, which invites one, especially in the late afternoon, to sit and listen to the sound of voices in the last minstrel pine.

With its pine and its pergola and its sun dial and its roses, all this garden needs is a nightingale or two—though the brown thrasher, hermit thrush and catbird are pretty good substitutes.

Certainly it is charming to move about these formal walks where rare roses are carefully nursed against supports and shielded so far as possible from slug and bug, from scorching and freezing. The white severe stairways climb the green slopes, presided over, it may be, by Mercury and Diana. The potted evergreens raise their graceful spires above the coping stones, and, farther back, the columns of the pergola gleam between the riot of green and red of the climbing roses. Here, among the standard plants, which are marshaled in formal squads and platoons, in companies and regiments, thousands and thousands of them properly pruned, trimmed, set up and aligned, there lies a small fountain. The big fountain is not in the rose garden at all, but forms the chief highlight in the green map that lies before one's eyes when standing on the terrace of the house. To reach it one passes an ornamental gateway in the hedge that bounds the rose garden to the north and finds oneself on the big lawn that stretches up to the house without a break. It is a small lake of a fountain, suitable for gold fish and carp, set on the smooth grass and surrounded on two sides at a respectful distance by young woodlands, which in their turn conceal a brook of many pools and little falls and nooks full of iris and wild swamp flowers, the outlet of the string of four lakelets spoken of above. The group in the big fountain is one of sleepy Naiads teased by a Cupid; one has risen and stretches her arms lazily in the veil of drops carried over her from the jets of water; the other is still

An Arch of Massive Stones Connects Two of the Small Lakes

slumbering as she sits. Their arms form graceful curves against the surrounding foliage.

There is so much to see at "Yaddo," its spaces are so broad, its vistas are so extended, its views so superb, its general sense of ampleness and extent so wonderfully fine, that one is perhaps apt to feel that in seeing so much one has seen it all. As a matter of fact, one might spend several days in wandering through the grounds, delighting oneself with the wonderful natural beauty of the place and the quite as beautiful and almost as wonderful way in which art has been made to aid nature in these splendid grounds. And the more one wonders the more one sees. New beauty spots are continually being discovered, new evidences of thoughtful care and fine utilization of possibilities made clear with each fresh turn in a walk or each new venture into some wooded groves.

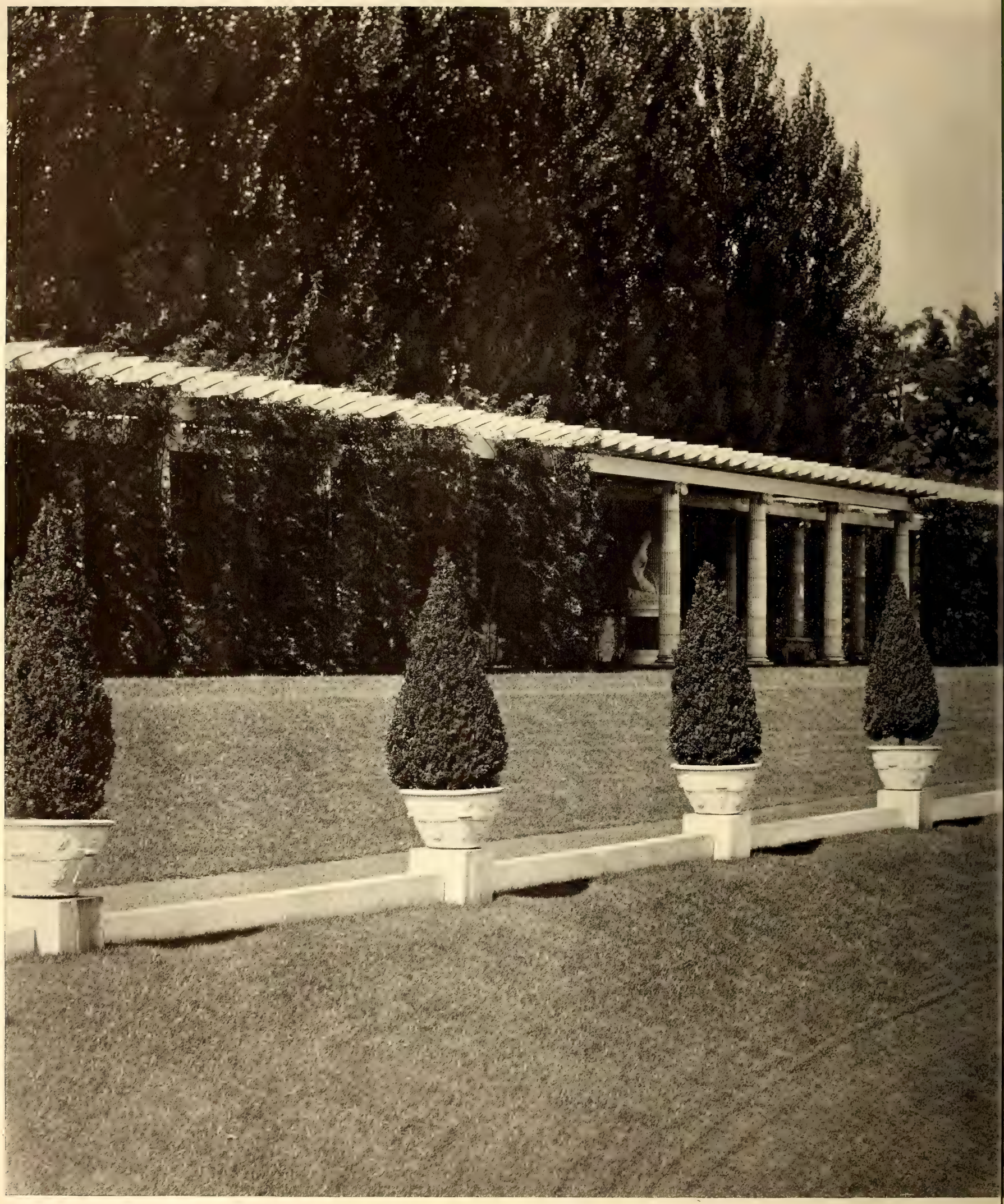
The grounds are not only charming in themselves, but abound in charming surprises, each of which has its own note of interest and each of which, even in its separate development, bears a more or less relationship to the general scheme. This, indeed, is one of beauty only, for it is to make a beautiful garden, a beautiful, great garden, that "Yaddo" has been developed to its present splendid stage.

It is not an uncommon error for the owners of great gardens to make their estates a collection of different sorts of gardens, a museum of gardens, as it were, each of which, while fine in its way and well worthy of admiration, suffers somewhat from its proximity to another garden of a wholly different kind. One of the most striking features of the garden plan of "Yaddo" is the avoidance of just this error, which is often excusable with the very ease with which it can be committed. The water garden at "Yaddo" is a case in point. One may wander quite extensively through these spacious grounds before one comes upon this spot, which is hidden behind some hillocks planted with trees. It is a small space compared to the vast areas of "Yaddo," but still so large as to seem quite spacious, judged by the Japanese models.

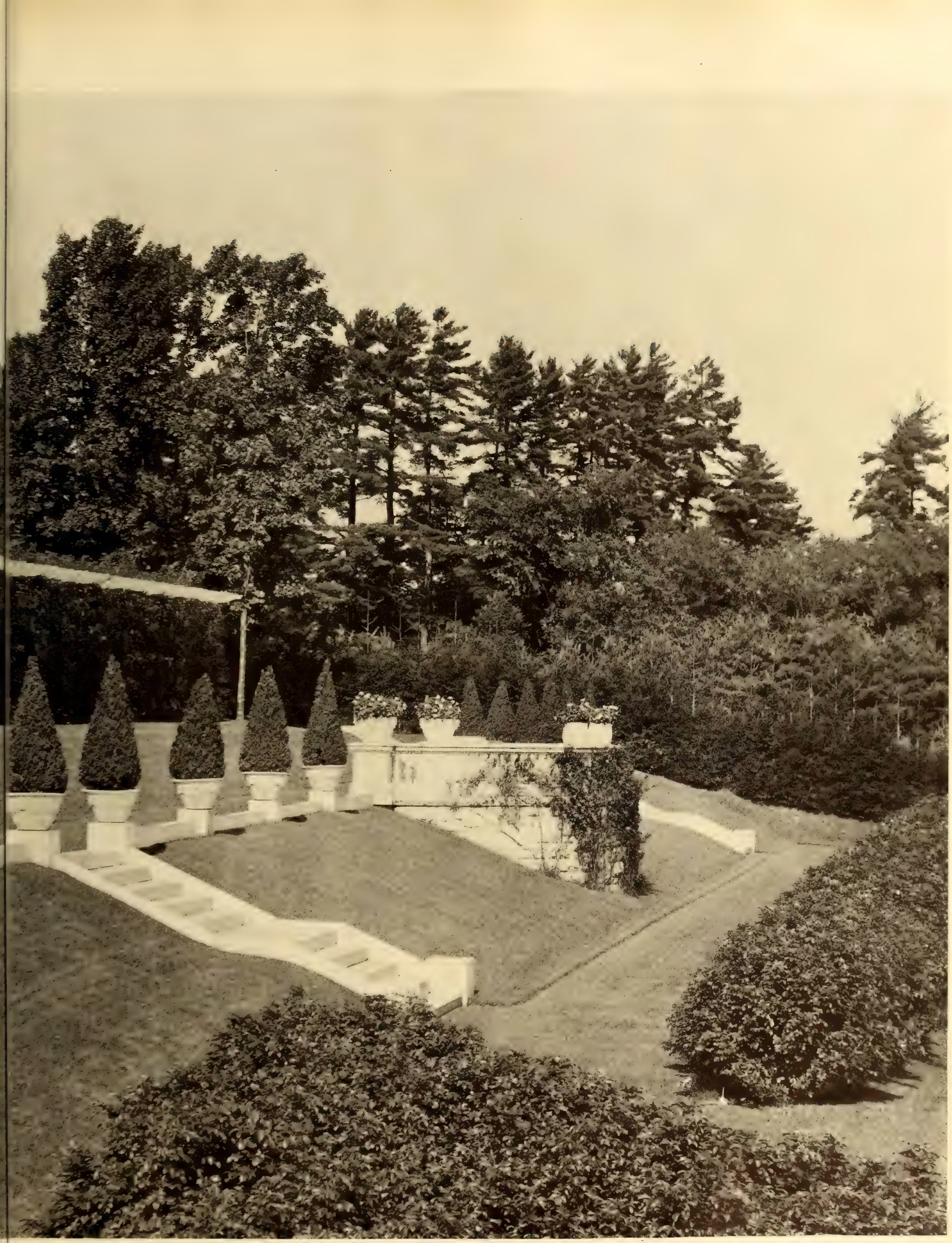
Masses of rocaille are covered with plants that thrive in moist places, and the pools that are allowed to form at different levels are kept supplied by a slender stream hidden by ranks of iris in the varied Japanese shapes and colors. Seated beside one of these pools one is in another world, shut away not only from the gay, driving world of Saratoga, but from the grave, noble landscapes of the valley. A Japanese stone lantern rises here and there, or a rustic bridge crosses a stream; a marble maid sits pensive, like Rautendelein, regarding the lily-pads. The air is supplied with the necessary moisture by jets that fling a fine spray over rocks and ferns. Care is taken that, as the season passes, certain flowers come into blossom and so change the color scheme from month to month, new bulbs being planted, new plants set out to take the place of annuals, while the permanent flowers are so disposed as to form a regular succession of delightful disclosures.

The Upper Pool and the Water Garden. As the Seasons Succeed One Another Certain Flowers Bloom, thus Changing the Color Scheme from Month to Month

Thus, absolutely out of sight of the house but within a few minutes' walk, there are two gardens for the fortunate inhabitants of "Yaddo" and their many guests in which they can feel themselves quite alone and as if removed by miles from inquisitive eyes. And this has been done slowly, under the eyes of the masters, without calling in armies of laborers in an attempt to finish everything overnight. It is wonderful what a man in active city business can accomplish



"Yaddo"—A Pergola Extends from North to South its Fluted Columns, its Open Rafters
Rose Garden. Broad Pots Stand on the M



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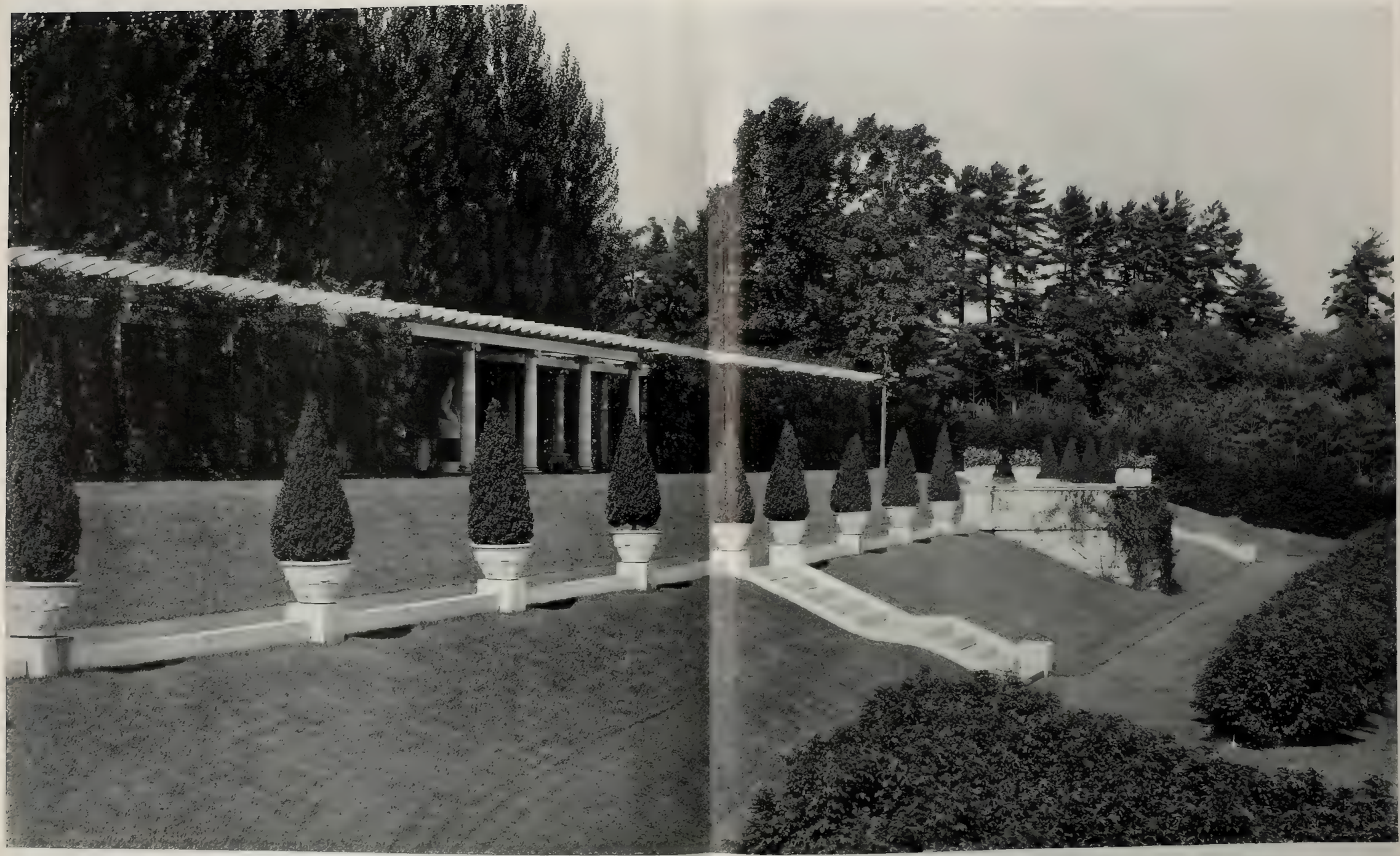


"Yaddo"—A Pergola Extends from North to South its Fluted Columns, its Open Rafters Clambered by Crimson Ramblers. Marble Stairs Descend to the Lower Terraces and the Rose Garden. Broad Pots Stand on the Marble Piers and Carry Green Cedar Cones

with his leisure time by constant personal supervision and a genius for accomplishing things. But the real spirit that puts "Yaddo" apart from many of the splendid country places in America is the personal touch of its makers on every part of it—house and lawns, gardens and woods.

It is evident that the place is loved for itself as well as for its associations, that both mistress and master regard it as a home, not a show place or one for entertaining guests, though it has become both one and the other through the attractive personalities and social genius that preside there. Only a woman aided by a man keen to understand and helpful to suggest could have given this house and estate the original atmosphere one breathes in it. There is no sense of rawness or newness, but an expression of individuality that objects acquire which have been worn, like a glove or a slipper. Absorbed in her reading and literary work Mrs. Katrina Trask has yet built about her a home that any woman might envy, for it fits her and her husband as only that house can which is the result of personal study, of careful planning from the first sketches to the stained glass windows in its hall and the andirons on its hearth. It is this slow accretion under minds that understand each other's point of view which makes "Yaddo" so interesting, not the number of its acres nor the

The Main Road with its Rough Stone Coping Sweeps Around the Lower End of the Lake

A Marble Water Nymph is Seated in One of the Pools of the Rock Garden. Fine Sprays of Water are Flung over the Rocks and Ferns

Along the Pleached Alley are Platforms Surmounted by Classic Roofs Borne by Ionic Columns of Terra Cotta

length of its terrace. The pleasure it has given its owners while adding tracts to the demesne and buildings to the farm, planting a grove here and opening a road or vista there, makes itself felt by others in some inscrutable way, and, without knowing why, they, too, feel pleasure.

As an instance in point, there is the rose garden. It exists because to Mrs. Trask the rose is the transcendent flower, but for herself she never would have planned and stocked such a magnificent example. Nor for himself, in all likelihood, would Mr. Trask have become so great a rose collector. But since they love roses the passion has grown, until only a space of many acres can hold the plants; and, then, the pleasure both feel can be extended to their friends. Several years ago Mrs. Trask established in Saratoga a training school for servants, which, in summer, is often opened to the children from the Albany hospitals, and the rose garden comes in very happily to supply the convalescents with flowers. And there are others, too. Things of this kind one learns over the lunch table where friends from Saratoga gather under the genial presence of their hosts.

The Kitchenette

ALTHOUGH the kitchenette is not the newest idea in things pertaining to the kitchen, its end and collapse—or, perhaps, more strictly speaking, its approaching end and collapse—is the latest idea that has wafted out from the great world of hoteldom in which so many strange devices are in vogue for the compressing of many things into the smallest possible amount of space. The kitchenette was not exactly a labor-saving device, but an arrangement that was intended to meet the needs of those who, living in apartments, wished to do their own cooking, or at least a part of it.

The kitchenette was a very small room, something larger than a closet, something decidedly smaller than a kitchen. Its conveniences consisted of a gas stove and an ice chest. It was obviously simple and compact. Its possibilities were obviously limited; one could not do very much within it, but one could, on the other hand, prepare there simple breakfasts and luncheons.

It is perhaps not generally known, but it is a well ascertained fact, that many of the most expensive hotels in New York house people who practise all sorts of petty economies in order to pay their room rent. The kitchenette idea was invented largely to meet the needs of such tenants. At all events, it was first applied to apartments of considerable cost, apartments whose rent was so high that the tenants might very well afford to rent larger apartments or purchase their meals in the hotel restaurant.

But there is a charm in cookery—to those who do not have to cook. The fair young wife is delighted with the conveniences which enable her to prepare breakfast for the doting young husband, until the novelty wears off or it becomes inconvenient and distasteful to wash the dishes after every home-made repast. The smallest of kitchenettes entailed some drudgery, as all household work does, and thus the popularity of these apartments began to fail. One by one they were deserted, and as they were attached to rooms for which good rent was demanded there were no frugally minded young couples to take the place of the dissatisfied ones.

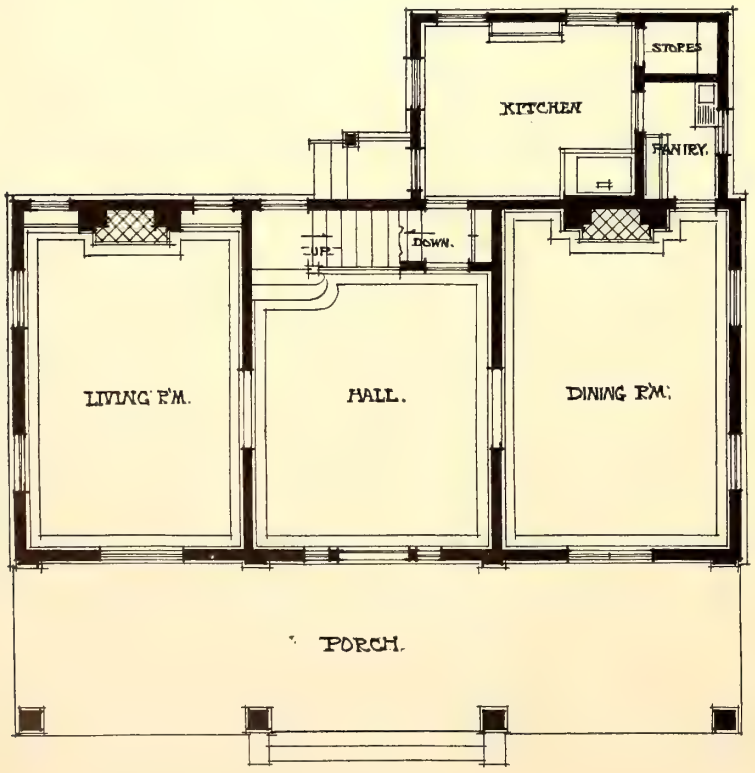
The obliging landlord maintained a storeroom, from whence sundry supplies could be obtained by telephone.

The House of James Imbrie, Esq.

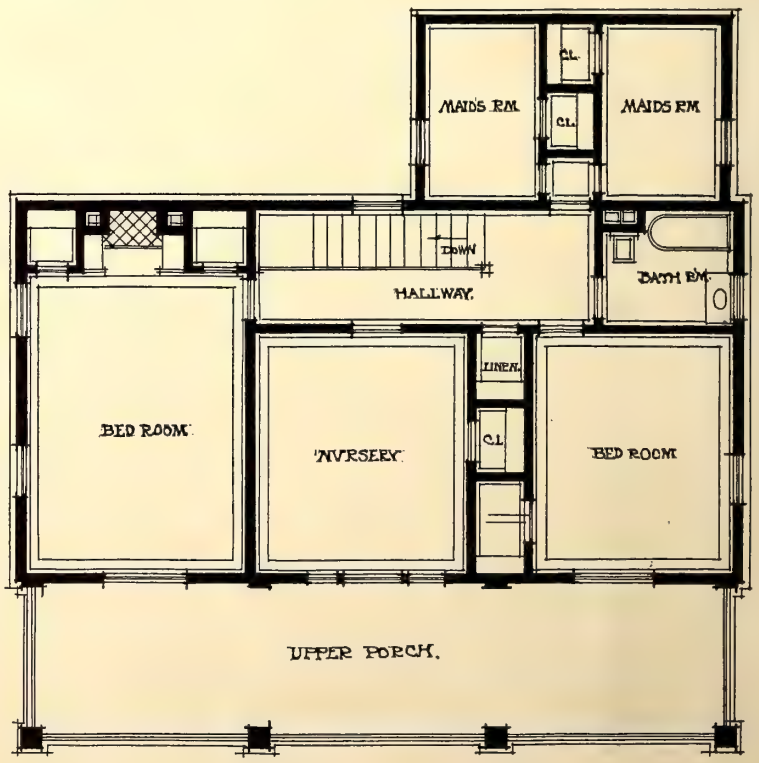
Englewood, New Jersey

THE suburban home of James Imbrie, Esq., at Englewood, N. J., is designed and built in a quaint and interesting manner. It is the simplicity of this design which makes it attractive; simple in its form and simple in its design, and without the usual superfluous ornamentation which is so often attempted in the smaller homes, is what makes it so attractive and pleasing. The four columns of the "Mount Vernon" type at the front, which support the roof, lend dignity to its exterior. The stone foundation, with rock faces, supports the superstructure, which is covered with clapboards, and the whole of which is painted white, forming a very pleasing contrast with its wooded surroundings. The roof is covered with shingles.

The entrance is into a central hall, containing an interesting staircase with ornamental newel, balusters and rail. At



First Floor



Second Floor

either side of the doorway there are placed tall windows, extending from the floor to the height of the front door, from which an entrance may be made into the hall.

The living-room is placed to the left of the hall, and is trimmed with cypress stained and finished in Flemish brown. This color scheme harmonizes well with the deep green tinted walls. The elongated effect of this room is lessened by the ingle-nook which is placed at one end of the room, thereby breaking its length. The separation is formed by a beamed archway which is supported on octagonal-formed columns. The ingle-nook is raised one step from the level of the main floor, and contains an open fireplace with facings of rock-faced stone, and a mantel, with bookcases built in on either side, above which are placed stained glass windows which shed a soft and pleasant light over the ingle-nook.

The Living-Room is Trimmed with Cypress and Finished in Flemish Brown

On the right side of the hall, and balancing with the living-room and ingle-nook, is the dining-room, which is also trimmed with cypress. The walls of this room are covered with a large-flowered paper, in green and red tones, to the height of six feet, at which point is placed a plate rack extending around the room; above this plate rack the walls and ceilings are treated in an Indian red tone. The fireplace is the special feature of this room, and is built completely of rock-faced stone of a pearl-gray color, with the exception of the mantel-shelf, which is of similar stone and dressed; this fireplace extends from the floor to the ceiling. Beyond the dining-room is the butler's pantry, which is fitted up with sink, drawers and dressers complete. This pantry forms the separation, and yet is the connecting link between the dining-room and kitchen. The kitchen is lighted and ventilated on both sides, and is fitted with a range, dresser and a large store pantry.

There are three bedrooms on the second floor, which are provided with large closets, and there are also a linen closet and bathroom, besides two bedrooms over the kitchen extension for the maids. The main bedrooms are treated with an ivory-white painted trim and artistic wall decorations. One of the bedrooms has a fireplace with a tiled hearth and facings, and a mantel, which is recessed into an ingle-nook and provided with seats on either side. The bathroom is furnished with porcelain fixtures and also supplied with exposed nickelplated plumbing.

The Dining-Room Has a Splendid Fireplace of Rock-faced Stone

There are two rooms and a trunk room on the third floor, and the cellar contains the heating apparatus, fuel rooms, laundry, etc.

The simplicity of the plan is entirely in harmony with the simplicity of the exterior. It is a straightforward, direct arrangement, with rooms of good size and so planned that irregular spaces are practically eliminated. It is in thorough keeping with this simple plan that the exterior is designed on lines somewhat severe, it is true, but good and pleasant. It possesses, therefore, some of the most important elements to be found in the building of a good home. It is a house of significant interest and of excellent parts, planned to design with fine skill and taste.

Mr. Aymar Embury, 2d, architect, 63 William Street, New York.

The Summer Home of Edward S. Grew, Esq.

West Manchester, Massachusetts

JUST before the Boston train reaches the little station at West Manchester, Mass., it passes through a very picturesque and interesting bit of country, with its myriads of beautiful views of land and sea, the combination of which form very happy settings for the many stately mansions with which the "North Shore" abounds. From the little station a broad avenue winds its way, skirting along many beautifully kept estates, until a very imposing gateway is reached which forms the entrance to the summer home of Edward S. Grew, Esq. A serpentine driveway extends from the gateway, passing on through the highly cultivated grounds, which are well planted with many growing shrubs and flowering plants, until the house looms up among the trees in its magnificent grandeur. Passing on through a screened fence of Grecian design, the front porch is reached within this inclosure, and at either side of the porch are placed large pots of hydrangea hortensia which add a bit of color to the scene when they are in full bloom. The house is designed in the Colonial style, of the Georgian type, and is built of stucco, which is left in its natural silvery gray color, while the trimmings and all the exterior woodwork is painted white. The principal characteristic of the design of the exterior is the pilaster effect, which is finished with Ionic capitals. These pilasters support the frieze with which the building is surrounded, and the massive balustrade with which the whole is surmounted. The roof is covered with shingles.

Upon crossing the vestibule the "Great Hall" is reached, which extends through the depth of the house, with a commanding view of the sea. This end of the hall has broad openings which permit one to reach the grand portico, which forms the main characteristic of the ocean front of the house. It has a massive portico which is supported on Ionic columns, and a floor of red brick, laid in a herring-bone pattern.

The hall is treated in a handsome manner in the Colonial style, with paneled walls from the floor to the ceiling. Massive molded beams placed on the ceiling give dignity to the hall. The whole of the woodwork is treated with white paint, with many coats, well rubbed down, and left with a smooth surface. The grand staircase rises up from either side of the hall to a broad landing, from which a single flight of stairs extends to the second story. The balustrade to this staircase is very handsomely made from special designs. The newel posts are formed of a cluster of similar balusters, from which the mahogany rail sweeps up to the second floor. The fireplace, placed at one side of the hall, is furnished with facings and a hearth of marble, and a mantel with a paneled overmantel in good proportion.

To the right of the hall is placed the den and library, while to the left is the drawing-room, beyond which is the dining-room.

The library is trimmed with mahogany, and is surrounded partly with low book shelves, while the remainder of the wall spaces are filled in with a paneled wainscoting built up to the level of the top of the bookcases. At the opposite end of the room from the entrance is an open fireplace, provided

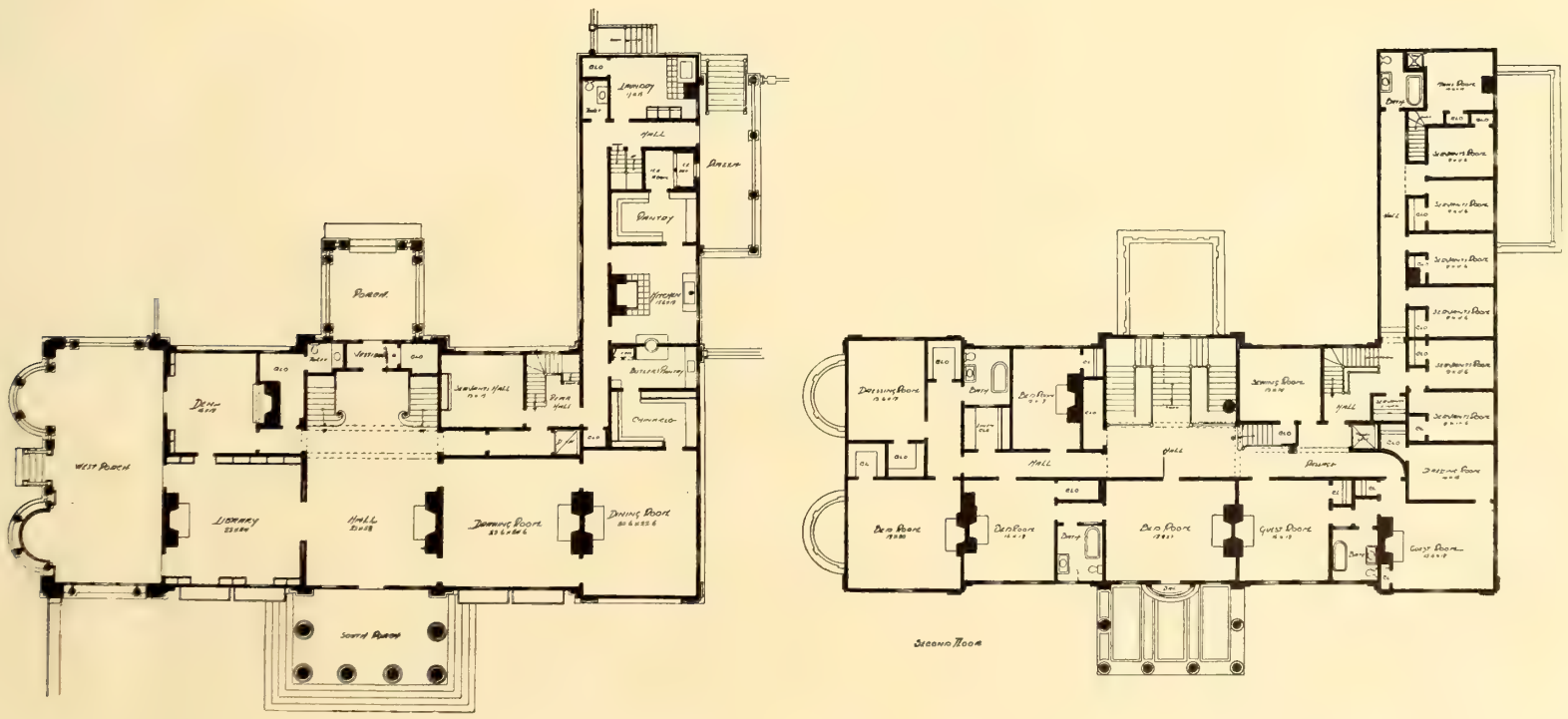
A House Designed in the Colonial Style and Built of Stucco Left in its Natural Silvery Gray Color

The Stable

with facings and hearth of onyx, and a mantel with pilasters and overmantel.

The den, connecting both with the library and hall, is treated with a green forest effect. It has bookcases built in, and a brick fireplace with hearth and mantel.

The drawing-room is to the left of the hall, and is trimmed and furnished in a most dainty and artistic manner. The conception of the room is quite sustained, however, for the architectural woodwork, the furniture and hangings are all of the French school, and the result is most excellent. There



Plans of the Summer Home of Edward S. Greer, Esq.

The Principal Characteristic of the Exterior are the Pilasters, which are Finished with Ionic Capitals

The Hall is Designed in the Colonial Style, with Paneled Walls from the Floor to the Ceiling

The Summer Home of Edward S. Grew, Esq., West Manchester, Massachusetts

The Woodwork of the Drawing-Room, Furniture and Hangings are French

is a low paneled wainscoting, above which the walls are covered with silk in a green and white tone, and the whole finished with a wooden cornice, which extends around the room. The ceiling is laid on in a geometrical form with plaster moldings, and is treated with an old ivory-white tint. The fireplace in this room has facings of white onyx, a hearth, and the whole is surmounted with a handsomely carved mantel.

The dining-room, which is adjacent to the drawing-room, is trimmed with mahogany, and has a paneled wainscoting, well laid and highly polished. Above this wainscoting the walls are handsomely decorated, and the whole finished with a wooden cornice. The fireplace, with onyx facings and hearth, has a mahogany mantel. A soft rug in harmony with the color scheme of the room covers the floor, and the furniture, of mahogany, is in keeping with the woodwork.

The service end of the house is placed in an extension and is arranged in a convenient manner. The china closet and butler's pantry are quite an unusual feature, and while each is separate they are also connected, and are fitted with all the best modern appliances. The kitchen, which is beyond, has a fireplace of Welsh tile facings and hearth, and its sink, its store pantries and ice-box, with an outside entrance thereto, are all good features, and are well fitted up.

The laundry, which is placed at the extreme end of the wing, contains a similar fireplace as the kitchen, and is furnished with a laundry range and a set of laundry tubs. The servants' hall is placed at the front of the house, and is provided with a dresser for the servants' dishes, etc. The long corridor which extends the entire length of the service quarters is placed on the side of the entrance court, while the service quarters are on the outside of the extension, thereby isolating them, so far as possible, from the living quarters of the main house.

The second floor is trimmed with pine treated with white enamel paint, and left with a glossy finish; the doors are of mahogany. The decora-

The Library is Surrounded Partly with Low Book Shelves

The Dining-Room has a Paneled Wainscoting and a Fireplace with Onyx Facings

tions of the various rooms are most excellent. This floor contains the master's suite of rooms, besides ample guest rooms. Two of the rooms have dressing-rooms connected, and also bathrooms attached, besides a third bathroom for the general use of the other bedrooms. These bathrooms are wainscoted and paved with tiles, and each are provided with porcelain fixtures and exposed nickelplated plumbing. There is a linen closet provided for the family linen.

The extension over the kitchen and laundry is fitted up with seven servants' bedrooms, bathroom, and linen closet for servants' linen, which are reached by a private hall and staircase. Extra guest rooms and trunk rooms are placed on the third floor. The house is equipped with an elevator, which runs from the cellar to the third floor, and is one of the features of its appointments. The heating apparatus, fuel rooms and storage spaces are placed in the cellar.

Messrs. Shipley, Rutan & Coolidge, architects, Ames Building, Boston, Mass.

The Home of Prof. H. A. Garfield

Princeton, New Jersey

THE house which is occupied by Prof. H. A. Garfield, at Princeton, N. J., and designed in the English half-timber style of architecture, was built for Dean Fine, a member of the faculty of Princeton University. It is built in a handsome manner, with a combination of stone and half-timber, and is delightfully situated among many beautiful trees and shrubs with which the site abounds, and is quite in keeping with the many stately homes with which Princeton is famous.

The first story is built of rock-faced stone, while the remainder of the building is constructed of half-timber, the panels being filled in with stucco work. The house is crowned with well broken gables, and a roof which is covered with shingles. The entrance porch is a handsome one, with its verge boards carved in an excellent manner. The entrance is into a central hall, at the opposite end of which is placed a flower window with paneled seats, over which is a cluster of leaded windows. This hall is trimmed with oak. The stair-hall is to the left of the main hall, and contains a staircase with a newel post representing a carved lion bearing a shield of emblematic design.

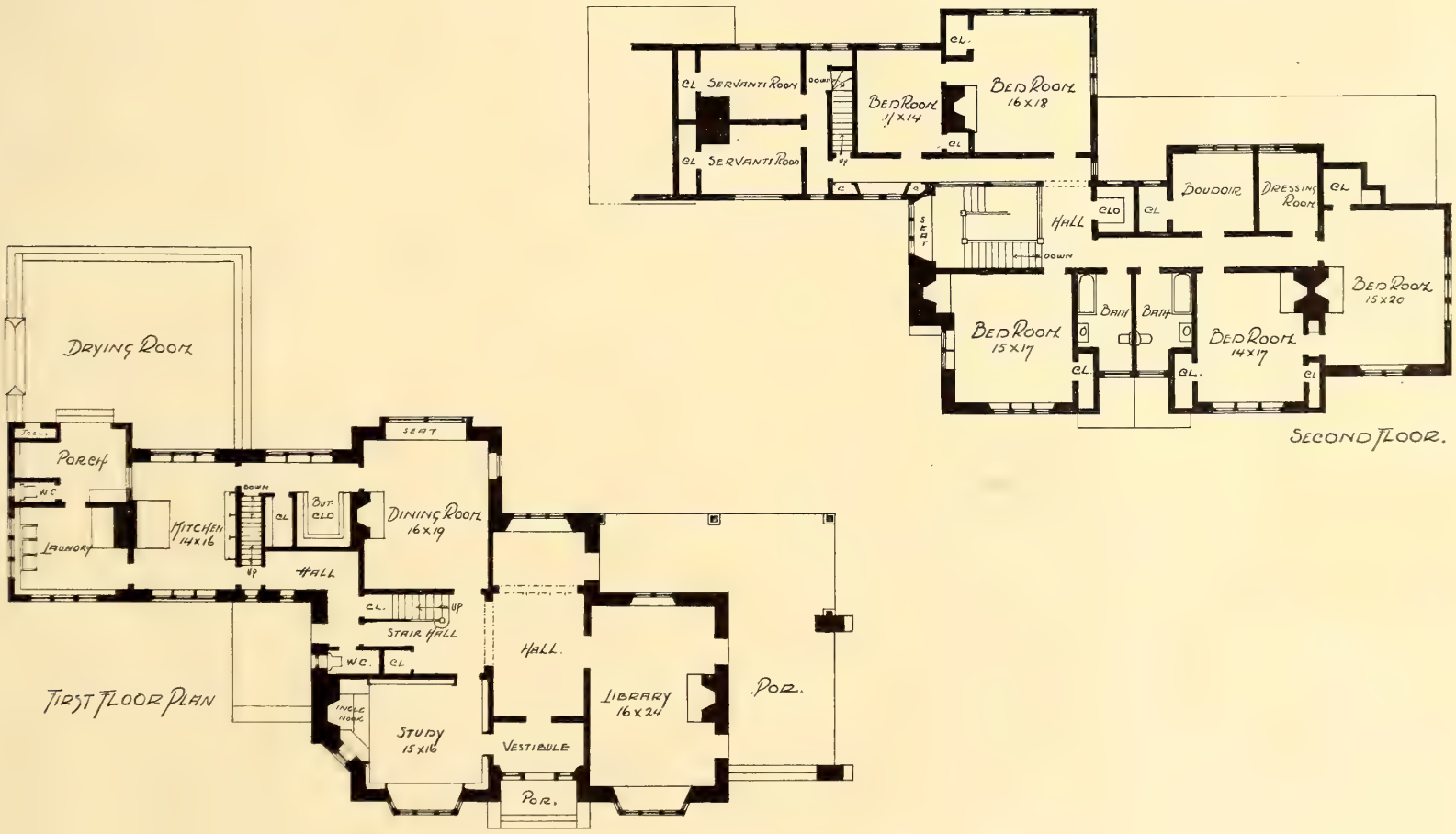
The living-room, to the right of the entrance, is treated with old ivory-white painted trim. The fireplace with which this room is provided is built of brick, with the facings and hearth of tiles, and a mantel of Colonial style. On either side of the fireplace is a French window which opens onto the living-piazza, which is, in winter, inclosed with glass, and forms a sun room. At the front and opening from the vestibule, as well as from the hall, is the study, which is trimmed with oak. This little study has a baywindow with seat at the front, bookcases built in around the room, and an ingle-nook separated by a beamed arch. The fireplace is built of brick with facings of the same, and a hearth of tile. The mantel is paneled with an overmantel with corbeled plate shelf, and the same paneled work is carved over the paneled seats with which the ingle-nook is provided.

The dining-room, trimmed with oak, has two baywindows with flower shelves and an attractive fireplace with tile trimming and mantel. The butler's pantry, kitchen and its dependencies are placed in an extension from the main house. The pantries are fitted up complete, and the kitchen, ventilated and lighted on both sides, contains all the necessary appointments for a well regu-

The Window at the End of the Hall

Carved Verge Boards Grace the Entrance Front

A House of Stone and Half-Timber Built in the English Style



The Home of Prof. H. A. Garfield, Princeton, New Jersey

The Ingle-Nook in the Study

lated kitchen. The laundry, fitted complete, the laundry porch, with coal bins and the drying yard inclosed, all are good features.

The second floor is exceptionally well arranged; the main suite, consisting of two bedrooms, dressing-room, boudoir and bath, form the principal feature of this floor. Besides this suite there are three bedrooms and bath, while the servants' rooms are placed over the kitchen extension. This floor is treated with white paint and has attractive wall decorations. Four of the bedrooms have open fireplaces with tiled trimmings, and Colonial mantels. There is ample storage space on the third floor, and the heating apparatus and fuel room are placed in the cellar.

Messrs. Cope & Stewardson, architects, 320 Walnut Street, Philadelphia, Pa.

Moderate Priced Fireproof Dwellings

THE city of Pittsburg is claiming the honor of possessing within its municipal limits the first houses of low cost which are practically fireproof. The Pittsburg experiment is, therefore, one of the utmost interest. The houses are of the "semi-detached" type; that is to say, built in pairs with a party wall between. The basement walls are of hollow tile, 9 by 13 inches and 3 feet long, making a good 13-inch wall. The exterior walls are faced with red pressed brick, lined within with hollow tile, and the partition walls are made entirely of the hollow tile.

The floors throughout are practically monolithic and are composed of hollow tile laid in straight courses, filled between the courses with an inch of concrete. Steel fabric, used for tension, is embedded in a second lower inch of concrete. The porch floors are built in the same way. The interior floors are covered with tightly joined grooved flooring. As little wood as possible is used. The roofs throughout are of tile, and the porch supports are of fireproof blocks embedded in cement. Steel framing supports the tiling of the roof and porch.

The Household

Mixed Furnishings

ONE of the commonest difficulties that the housekeeper is apt to fall into is the promiscuous use of furniture in a promiscuous way. Most households contain a very miscellaneous lot of furniture, gathered in various ways, obtained at various times and from various sources, furniture intended for many uses and which has survived the wear and tear of usage, too good to throw away, perhaps not really good enough to keep. It is often a serious problem what should be done with such furniture, especially when a new house is taken or a general rearrangement made.

The drastic remedy of destruction and ejectment is, in many cases, the only safe one. Complete uniformity may not always be possible, but at least approximate uniformity should be followed. A room furnished in a single style, or with furniture of a homogeneous kind, has marked advantages in esthetic effect over one that, at first glance, seems to be a museum of furniture, and which on further inspection is revealed as a place of last resort; nothing more.

The situation is bad enough when the relics of several rooms, of several houses, or of several replenishings are thus gathered together; it is much more dreadful when this effect is the direct result of simultaneous purchase—and this happens oftener than there is any need for. Many furniture buyers start out without any preconceived notion of what to get, and with absolutely no idea as to how their furniture is going to look in the rooms for which it is destined. They choose anything that strikes their fancy, and then when the room is finished wonder why it is not pleasing.

It is because of this lack of foresight, this inability to see rooms as they will be, this lack of knowledge of good furniture and ignorance of the principles of good furnishings that so many tasteless rooms are evolved at great expense. There is not the slightest necessity for this state of things. It is a very easy matter to obtain good advice on such subjects, and if one does not know what to do oneself one should seek the necessary advice in the proper quarters.

The case of mixed furniture that has survived is more difficult. Some pieces may be well worthy of preservation, some may be too good to throw away; but the result is sure to be hodgepodge, and there can never be the satisfaction that is rightly felt in rooms furnished from the beginning in a homogeneous manner.

Success in furnishing is determined by results. Results are determined by taste. Objects good in themselves may not be good when placed in close juxtaposition in the same room. It is a difficult matter to furnish well, that is, with a keen eye to good taste and an appreciation of comfort and utility. But it is only on such lines that satisfactory and satisfying results can be obtained. Mixed furnishings, promiscuous furnishings, haphazard furnishings, are to be avoided as the most dangerous of household expedients. They are common enough in even good houses.

Helps to Home Building

The Persons Concerned

THERE are four persons, or groups of persons, concerned in the erection of the house, each of whom bears a definite relationship to it, and each of whom is vitally concerned with it. These are (1) the owner, (2) the architect, (3) the builder and (4) the family. The order in which they are here set down may not be quite logical, for the family would seem to be so close to the owner as to be inseparable from him; and the builder is comparatively unimportant, since if an architect is employed he employs the builder, and the owner has no responsible relations with him.

The owner, of course, is supreme. He is the boss. He hires every one, and even the mighty architect must submit to his will. He pays all bills, and after the house is finished it is his. It is impossible to overrate his importance to the undertaking; and yet he would be a wise man if he did not take too much upon himself because of these primary facts. There is responsibility in supreme control which is often quite as great in a house as it is in the management of a railroad or in conducting the affairs of State. As a matter of fact, the average owner, the every-day owner, has but the slightest knowledge of architecture, and quite as little of building. He will often get more satisfactory results by simply paying the bills than by introducing his personal views at all times and under all circumstances.

The owner employs the architect, and immediately finds he has hired a man who knows more of the business upon which he is about to embark than he does. This is always awkward, and sometimes leads to unpleasant complications. It is quite as true of house building as of any other industry. A client who has definite views of his own, and can express them intelligently, will be welcomed by the architect if these views are reasonable and capable of being carried out within the agreed-upon limit of cost. If unreasonable results are demanded some very unpleasant experiences may be looked for. The tendency among architects is to insist that their own views shall prevail in matters in dispute, and in face of the frightful ignorance among the greater public on architectural matters they would seem to have the better side of the argument.

The essential point to bear in mind is that these two high contracting parties, the owner and the architect, are intent upon the production of a single work. The architect has not the intense personal interest in the undertaking that the owner has unless the house be one of unusual magnificence, size and cost, when professional pride will spur him to extraordinary efforts; but he values his professional reputation sufficiently to give full measure of return for his pay. The owner, on the other hand, is so keenly alive to his own personal relationship to the enterprise that he often fails to see the architect's point of view. Unless a common meeting point is permanently reached things are apt to become extremely unpleasant.

The builder hardly counts as a positive force if an architect is employed, as he is a subordinate employee, whose business it is to carry out the requirements of the specifications under the superintendence of the architect. His work is mechanical, but not the less essential. That there are good builders and bad builders is as true as that there are good architects and bad architects. The owner, however, will do well to fasten the full responsibility upon the architect and rid himself of troubles he will personally be quite unable to settle.

The family is quite a different matter. The architect who may boast he can manage any single client hastily looks for cover when he sees a full-grown family making tracks for his office, each laden, no doubt, with a pet idea which must be immediately introduced into the building, to the exclusion of everything else. It is painful to think of the scenes that may follow, and it may be a wiser course to draw a curtain upon them.

It is, however, very necessary to keep all these matters well in mind in undertaking the building of a house. The house is built for the client and his family; he is entitled to have as many of his good ideas carried out as can be done for the money. More than that, indeed, he is entitled to have his bad ideas so modified and improved that the best of them can also be included. He must have the architect's best thought and his best work. He must not propose impossibilities. He must not ask for an Italian palace when he has only money enough for a Queen Anne cottage. He must not demand marble when the contracts call for brick. He must realize that his architect has some rights in the matter, and he must be prepared to treat all matters in a reasonable way.

And the architect must be tactful a thousand times a week. He must realize that the owner has purchased his skill and ability, and that these qualities, which have a marketable value, belong as much to his employer as the ground for which he has paid solid cash, that his house be built upon it. Mr. Andrew Carnegie once gave the real measure of success to a company of boys as trying to do all they were required to do by their employer and a little more. This is the best of advice to the architect. He must do all he can and a little more. He must not stop at the letter of his contract, but give full measure, heaped and running over. It is quite true that we have no body of public servants who so zealously insist on payment for their services as the architects. The records of their professional assemblies are filled with five per cent. discussions, and eloquent demands for more compensation. Let it be assumed they are underpaid—which has never yet been established—it is still true they must do everything they can to please their client, and must not stop when the letter of the requirements has been fulfilled.

And the family must realize that the money spent on the new house is spent for their own personal benefit. The house is planned for them; it is being paid for by the money of the head of the house, who may have won it by hard toil or may have comfortably inherited it. It is a well meant, generous expenditure, whether the actual amount be large or small. The house finished, the family should immediately welcome its excellencies in the heartiest manner. It may not be flawless, something may have been omitted which should not have been left out, something may have been done which would better have been left undone; but it is now too late to change, and the wisest course is to be as pleasant about it as possible, and find as many good points as can be found, ignoring the deficiencies in the general thankfulness that the work is done at last.

But the house will never be finished until the family has settled in it and a happy, pleasant family life begun there. A house must be lived in to realize the fullest measure of success. It must be as valued as a friend and so regarded.

"Windemere," the Summer Home of W. O. Underwood, Esq.

Magnolia, Massachusetts

IT IS doubtful if a more picturesque or rugged bit of coast along the shores of Massachusetts could be found than that which forms the site of this interesting house which was built for W. O. Underwood, Esq., at Magnolia, Mass. It is really built overhanging the cliffs, and while the entrance front faces the road, and is on a line with it, its main front faces the ocean. It is constructed of stucco from the grade line to the peak, and of a soft gray color, while the trimmings are of cypress of a soft brown tone.

The entrance is direct from the road and the front is well broken by its many different windows in artistic designs. The casement windows opening out, the arched window which gives light to the staircase and the dormer windows in the roof are all good features. The roof is shingled. Growing vines and rambler roses are growing over the stucco walls, while the group of shrubbery at one corner of the house nearly hides the service entrance.

The Dining-Room Has a Colonial Fireplace

The beauty of the house is not so much from the entrance side as where, overhanging the water, the broad veranda gives one magnificent views in every direction. This veranda, supported by massive pillars of wood, is wide and spacious, and the floor is not, as is usually the case, covered with rugs, but it is well fitted with comfortable piazza furniture.

The interior of this house is suggestive of cheer, and while it is simple in its treatment, the home atmosphere prevails as soon as one crosses the threshold. The plan of the first floor presents practically one room. The reception-room is trimmed with cypress, and has a low beamed ceiling and walls which are paneled. The broad, open fireplace shows a chimney-breast of glazed tiles, high up, and follows the custom of old Colonial houses. At one end of the room is an ingle-nook furnished with a paneled seat.

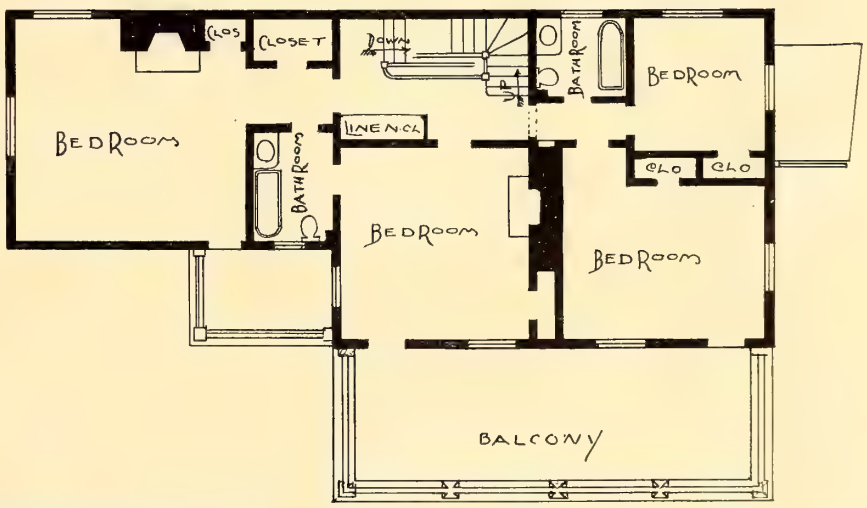
How a Veranda May Be Made Comfortable and Attractive

The dining-room, which opens from the reception-room, is finished with old English oak, while the wall hangings are of green. The ceiling of this room is beamed and ribbed in a massive manner. The fireplace, of handsome design, is built of brick which are laid in white mortar, while the hearth and the facings are of the same, and it also has a mantel with shelf supported on corbeled brackets. Over the shelf there is placed a rare old Colonial mirror, following the old-time settings of the Colonial rooms. At the end of this room, and partly screened from the main part of the room, is the staircase with its quaint balustrade rising up to the second floor.

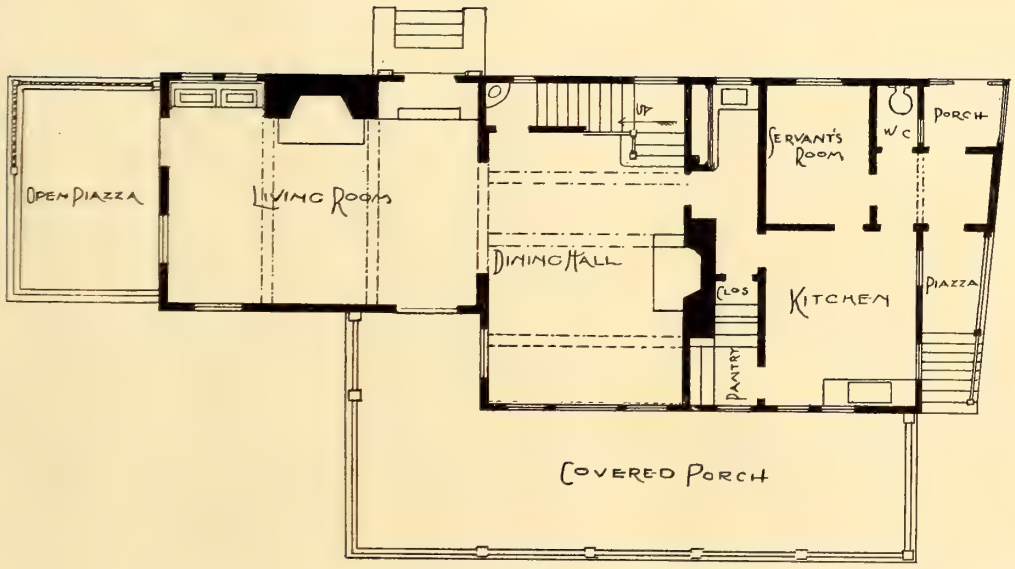
The butler's pantry is fitted with the usual drawers, dressers and sink, and is complete, while the kitchen, with which it is connected, is furnished with all the best modern conveniences and is well placed.

The second floor contains the several sleeping-rooms, provided with large well fitted closets and bathrooms. The bedrooms are finished in a simple but artistic manner, with white painted trim and a good color scheme. The bathrooms are fitted with porcelain fixtures and exposed nickel-

The Quaint Cottage of W. O. Underwood, Esq., Magnolia, Massachusetts



SECOND FLOOR PLAN



FIRST FLOOR PLAN

The Homelike Living-Room of the House

plated plumbing. The servants' quarters are placed on the third floor; there is also ample storage space on this floor. There is a small cellar for the storage of fuel, etc., underneath the kitchen part of the house.

It is a pleasant home, pleasantly designed and built in a charming spot. It is a homelike home.

Mr. Ernest M. A. Machado, architect, 8 Cornhill Street, Boston, Mass.

The Sand Box

By Ida D. Bennett

AVERY useful adjunct to the window garden during the summer months is found in the sand box. There is always the question before us of what to do with our house plants during the summer months, especially those that, through the warm weather, are not desired for bedding purposes, are not especially ornamental at this time of year, or those more or less tender seedlings that are being grown for winter use. For all these the sand box offers a most satisfactory solution.

Almost any size box of convenient shape—not too wide to reach across and not more than five or six inches deep—will answer, the size depending upon the plants to be accommodated, though this is an elastic estimate, as the number of plants are sure to increase through the summer beyond the bounds of one's most liberal spring estimate. The box should be raised upon some kind of supports—sawhorses will do as well as anything—to a height convenient to reach across when sitting on a chair or stool. It must be filled with clean, white sand and kept constantly moist. The best general location for the sand box is on the south or east side of the house, according as the plants require much or little sunshine. For such plants as geraniums, roses or coleuses the south side will be found favorable, for ferns and the like the north offers greater inducements; but for the general run of plants the east side, with some protection on the south, is the ideal situation.

Plunge the plants deep in the sand showering every day. The space between the pots may be utilized for rooting cuttings. I have rarely found any cutting fail to root, and roses are especially sure—simply press them into the sand, press the sand closely around them and leave them until they show vigorous top growth, when they may be potted off or placed in a prepared bed. Gloxinia leaves laid on the surface of the sand—the stems caught under a pot—are sure to root, and should be left undisturbed until fall to form bulbs.

Tuberous begonias, potted and plunged into the sand, bloom luxuriantly, as do also the Chinese hibiscus, crinums and many other sun and moisture loving plants.

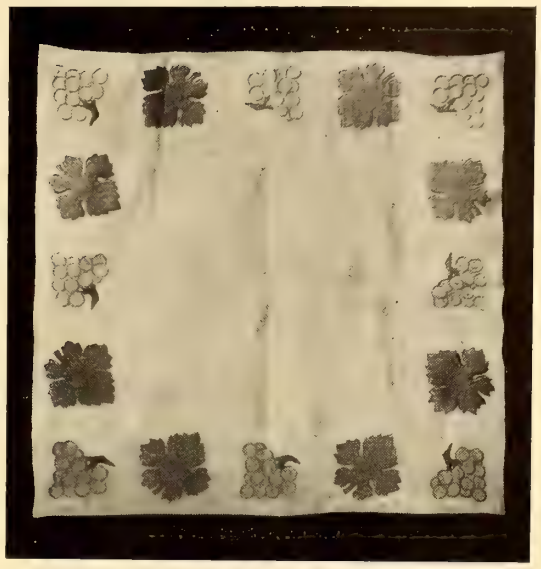
Aside from its convenience as a summer home for plants the sand box has the advantage of being out of the reach of predatory cats and dogs. It may be made attractive with trailing vines, and form a fascinating spot to the flower lover, and its general contributions to the winter garden will more than repay the trifling time spent in its care.

Appliqué on Inexpensive Materials

By Mabel Tuke Priestman

UNTIL a year or two ago the word appliqué suggested luxury. Costly hangings embellished with appliqué were rarely ever seen by the average person. They were read of in books as adorning the mansions of the wealthy.

The expensive materials upon which the work was done, and the enormous cost of labor expended in applying intricate designs, placed the hangings at a price far beyond the reach of the ordinary householder. Now we constantly run across good appliqué work which has been done in linens and mercerized cottons in excellent designs and which has entailed only a moderate amount of labor. Such work can be undertaken by many who wish to add to the beauty of the home.



Holland Tablecloth with Appliqué of Dull Green and Purple in Shaded Linen

Most women have some skill with the needle and many have a natural taste in the choice and arrangement of colors. The charm of modern appliqué work lies in the use of good, bold designs and in the selection of simple and effective colorings. The frank use of a wide stitch here and there gives a pleasing variety to the outline of a design. The knowledge of how to do appliqué work is really a combination of needlecraft and color sense, and is not at all hard to acquire.

In many cases, especially where it is used for wall decoration, the design is first stenciled and then outlined with embroidery. This is also effective for portières when it is felt that time can not be spared for more elaborate ornament.

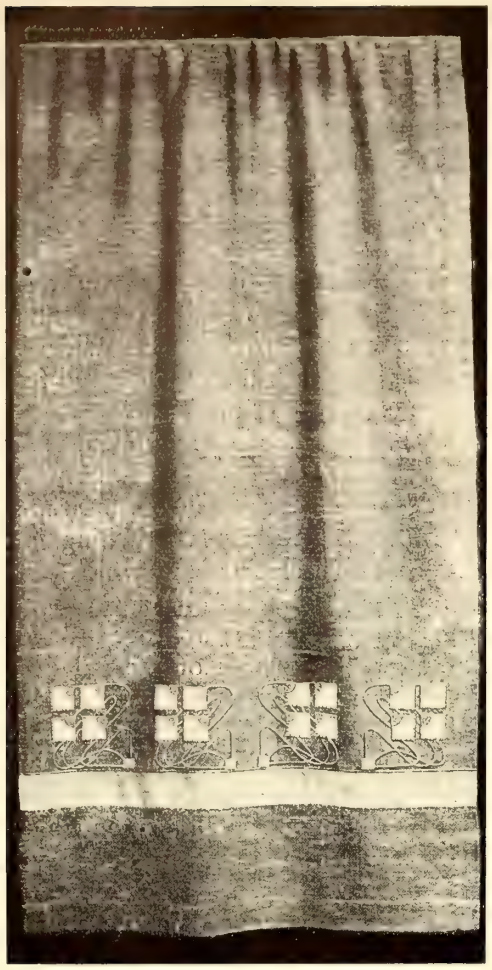
A bedspread of yellow linen, used in a yellow and brown bedroom, was made in five strips. All the seams were concealed by a stitching of heavy brown embroidery, which also hid the hem line, while a tiny tree ornament in outline appeared above the hem at the base of the valance. The same motif was repeated in the window curtains. Another decorative bit of needlework was shown in a table square, made for a craftsman's dining-room, of white linen, on which corn-colored linen was appliquéd for the flower motif. A rich note of brown was introduced in the couching which held the appliqué in place.

One of the best ways of preparing designs for appliqué work is to trace the design upon the material to be used as the appliqué and fasten it securely with drawing pins on a table. Then lay red or black transfer paper face downward upon the linen or muslin, or whatever material you are going to use. Place your design upon this, going over the lines firmly with a blunt instrument. After removing the paper, if the design is not sufficiently indicated go over it with a lead pencil. Then cut out the shapes and paste them lightly on the groundwork. It is best to sew them at once,

An Arras Cloth Portière with Tapestry Border

Tomato and Green Linen Leaves Applied on Holland as a Separate Border

Lattice Window, Showing a Novel Treatment of Curtain Ornaments



An Arras Cloth Portière that Can Be Quickly Made in Appliqué

seems a waste of time, for if the design was outlined by couched threads it would look quite as effective and take a great deal less time to do. The stems are worked in crewel stitch or stem stitch, as a rule, but every now and then designs can be seen with the stems formed by tiny silk cords.

A child's coverlet was made of two pieces of coarse Holland, the back of it being cut larger than the front and brought over and joined four inches from the edge. This is concealed, by a line all around it, of blue-green embroidery worked in satin stitch. The leaves and stems are cut in one piece and are made of olive-green linen. Some of the flowers are peach color, while some are a tomato red. The flowers are all outlined in the deepest shade of red, worked also in art stitch, the leaves being outlined with the blue-green used on the hem line. This piece of work is very beautiful, though nearly the same effect could be gained by couching the outline. Couching is a thick strand of linen flax or crewels laid around the applied design, and stitched at regular intervals by threads crossing the couching line at right angles. Cord is applied in the same way. The couching may be made of filoselle or embroidery silk, according to the texture of the material used. Some workers prefer the linen flax or mercerized cottons on coarse linens, but many find the silks easier to work; the effect is so much the same that it is best for the worker to use what she likes best to work with.

A tray cloth would require a light couching stitched about one-quarter of an inch apart. On an arras cloth portière with a large design the couching might have six strands of heavy linen flax and be stitched an inch apart.

Stem stitch is the best stitch to use for stems and places where no appliqué is needed; it is simply a long stitch forward on the surface of the material and a shorter one back on the under side, working from left to right.

Art stitch or satin stitch is the same on both sides, and is done by passing the thread evenly from one outline of the pattern to the other.

A design which can be adapted for sideboard cloths or portières is the one used as a curtain in a lattice window. It is made of cadet blue and deep olive linen on a ground of white, and is embroidered like the child's coverlet. This clever design was used on a portière with the base of the design forming a three-inch band of deep color on the side of the portière, the same piece of linen forming the leaves and stem, while the fruit was of a contrasting color.

I also used the same design enlarged for a frieze treatment on a blue arras cloth portière. The appliqué was in two harmonizing shades of blue linen and was most attractive in a blue room with mahogany furniture. The drawing is so simple an amateur who had little technical knowledge could take the design and draw it from the illustration.

A cushion design on blue-gray linen had an appliqué of blue linen for the leaves couched with the same shade of linen flax. The bird was in ecru linen on a ground of blue a shade paler than the leaves. The design can also be used as a stencil.

A tablecloth of gray-blue had the groundwork left for the leaves, the appliqué being one large piece of dull green linen. This was an intricate piece of work, as every leaf and all the green surrounding were outlined in satin stitch exactly the shade of the groundwork. It must have taken hours to make, and no doubt would have been just as beautiful with a couched edging.

Child's Coverlet on Holland with Green and Red Linen Appliqué

A curtain of arras cloth, with the design outlined in cord, and the flower motif held in place by blanket stitch, shows what I mean by quick needlework giving the effect of good appliqué work although requiring much less labor. An inexpensive curtain can be made of green arras cloth with a tapestry border obtainable at any upholsterer's. It has leaves and flowers.

Cushion in Blue Linen and Table Cover in Green and Blue Linen

Principles of Home Decoration

IV.—The Withdrawing-Room

By Joy Wheeler Dow

WHERE the mechanism of an orthodox ménage—that is to say, a household with two or more servants, and where there is a fairly well maintained system of duties for all its inmates—is established in a suitable architectural setting, not to say a mansion, a withdrawing-room is not only proper but necessary—some room to which to withdraw after dinner or luncheon, or even after breakfast, as the case may be. But in the average American cottage it is doubtful if a withdrawing-room is just the thing, at any rate to call it so. I say "withdrawing-room" because its shorter and more usual form—"drawing-room"—has only one syllable less to commend it for convenience in speaking, while there are decided objections to its general adoption in lieu of the homely but very sensible "living-room."

When I was a boy I always thought that a drawing-room was a draughting-room, and as I was fond of drawing I envied the possessors of those houses with such conveniences very much. A drawing-room car was a car for the use of railroad engineers, and perhaps artists and architects while en route; and if my older brother did call me "a stupid" for entertaining such an idea, and had to explain to me that a drawing-room was merely the English equivalent for an American parlor,* I do not believe I was one bit more stupid than ninety-nine out of every one hundred American boys at that time, when, although all Americans were supposed to have studied the English grammar, few practised it in either speaking or writing, preferring "you was" to "you were," and "it was him" to "it was he," without the slightest compunctions of conscience; and this, my dear reader, was the halcyon day of the great American parlor. I regret I have no illustration of this national apartment at the height of its universality. The old Stewart mansion, which formerly stood at the corner of Fifth Avenue and Thirty-fourth Street, could have supplied an example of a most sumptuous parlor, but that is no more. Let me say, however, that of all the useless, ugly and yet expensive conventions American society has invented or known our conventional parlor was the worst. And although we have gotten rid, to a great extent, of the odious word, and when it seems too pretentious to say "drawing-room" we say "living-room" instead, still the science of furnishing and decorating this apartment, so difficult to describe, appears to be even more difficult, judging from even our latest endeavors.

1—The Poor Taste of the Average American Parlor

2—Of Course, Not Every Drawing-Room in England is as Good as This

There are few, indeed, good American withdrawing-rooms, and of these few I have but one at command for use in this paper.† If an American be prosperous in money

* The Pullman Company used to defer to this Americanism and call their productions "parlor cars," until they substituted the single word "Pullman"; but the Wagner Car Company's manufactures were always called "drawing-room cars."

† I will not say that Fig. 8 represents the best that has been achieved by American designers of drawing-rooms, but it is the best I have at my disposal for this article.

matters, why, Fig. 1 shows us the kind of thing for his withdrawing-room, living-room, reception-room or parlor he is apt to affect. The furniture is all of it bad in design, but the chair in the center of the picture is the limit. There are two good features in this reception-room or parlor—the ceiling and door panels—and they should be noted as having fallen in with very detrimental company. Yet chairs, tables and divans no better than these are daily advertised for sale by our leading furniture manufacturers, and even exposed in shop windows along our best business thoroughfares.

It is a curious fact that the American, so progressive in matters scientific, hygienic, and of inventive achievement, should be so "dead slow" wherever art is concerned, and more especially in the art of the home. I have had otherwise cultivated people come to me as clients, through somebody's advice, I imagine—an architect rarely obtains a commission from his shingle—who have simply no conception of good architecture, either exterior or interior, and who, apparently, have no desire to learn, for after I fancied I had them fairly enlightened and coached upon some rudimentary principles by dint of long and patient conversational tutelage, like as not they would ask me to inspect some very inferior cottage a carpenter and builder had constructed for a friend, or to see just such chairs, five o'clock tea tables, divans and anomalous windows with transoms, as we have in Fig. 1.

3—Here One May See Effort in the Righ. Direction Thwarted by that Strange Fatuity of the Average Householder in the Realm of Art

Now just compare, if you will, this American parlor proposition with an Old World drawing-room (see Fig. 2, borrowed from English Country Life). Of course, not

4—The King's Hall

5—A Very Expensive and Very Vicious Table with Chairs to Match

every drawing-room in England is as good as this one; but there is no doubt about it, the English people look more at home in their drawing-rooms than do we in our parlors. Be they elaborate or plain, there is usually the good single idea pervading the whole scheme of appointments, and which we habitually lose sight of, and consequently lack (see Fig. 3). Here we have an example of the point in question—some really good pieces of furniture and some really good home ideas hobnobbing again with vicious and degenerate company. Here we may see effort in the right direction thwarted by that strange fatuity of the average American in the realm of household art.

Compare, if you will, again this terrible mixture with the delicious peace and quiet which reign supreme in the King's Hall at Hoghton Tower, in Lancashire, England (Fig. 4). For the life of me I can not understand why Americans, with all their educational advantages, still prefer the chairs and tables of Fig. 1 to those we see in use in Fig. 4. Note the gate table, the exquisite turning of its legs and its delightful lines generally. Probably there is not a gate table—which is a difficult piece of furniture to find in America, anyway—to be had in New York city with half as beautiful detail. But the salesman you meet at the door of the furniture warehouse uptown will hardly know what a " gate table " is; but he will show you " a very fashionable table," he will tell you, instead. Its counterpart you may see in the center of picture No. 5, with chairs to match. The wonder is, who buys it?

Before me, as I write, there is a gate table I have just purchased for twenty-five dollars. It is a small table, and plain beside the raving, tearing beauty in the King's Hall at Hoghton Tower. And it is very old and dilapidated—needs a thorough overhauling—and yet I would not exchange my table for the splendid Empire example shown in Fig. 6, with the gas logs thrown in to boot. For the love of goodness, and in hopes of a blessed resurrection, " don't never buy gas logs! " (acknowledgments to old Commodore Vanderbilt), even if you do have the money to pay for them. But Fig. 6 is a very creditable Empire interior, barring the terrible contrivance for holding exotics, to the left of the picture, and the flounced lamp shade. These are the insane notes that characterize this interior, varnished as a piano case is varnished, as howlingly modern and American, so that by no stretch of the imagination could one fancy himself a visitor to Fontainebleau as a guest of the first Napoleon.

To decorate, then, the withdrawing-room—or, if one's house be just a very humble affair, the living-room—which should always have some kind of doors to make it distinct and separate from the hall, eschew piano-top effects, except for the piano itself, for all highly varnished surfaces tend to defeat the purposes of every-day usage; at least they make us feel uncomfortable, even if we have the means to revarnish again, for scratches are always unsightly and disorderly. Choose the dull waxed finishes for your living-room; as with the dining-room, don't affect a severely pronounced style. That is the underdone way of decorating. And don't go in for the latest cult, such as we have in Mission furniture, so-called. Mission furniture, while good in many respects, has been vulgarized by fashion. Don't try to have the furniture all match. Really good, historical pieces of furniture rarely clash with one another. Note the different chairs in Fig. 2. I trust this perhaps dangerous advice will not lead you to select as many inharmonious things as we have in Fig. 3. Better err upon the other side, and have too few things, even to a sense of emptiness; for nothing is more fatal to a successful living-room than crowding and confusion. I have one good example of an American living-room (see Fig. 7), and I have kept it till the last, for the lasting impression. I have no idea whose living-room it is, nor who designed it and furnished it, but it is " all right," and as an object lesson may help the cause of the principles of home decoration more than anything further I can think of to say for the moment.

6—Highly Varnished Surfaces Tend to Defeat the Purposes of Every-Day Usage

7—A Model Fireplace for a Living-Room

8—A Good Type of Drawing-Room in a Seaside Home

The Sea of Salton

By Charles F. Holder

THE mysterious sea of Salton has again appeared. The great sink, two hundred and eighty feet below the level of the sea, in which stand the towns of Indio and Salton, is receiving vast streams of water, and where a few months ago men were working only the top of a large warehouse is seen and a sea stretches away to the horizon.

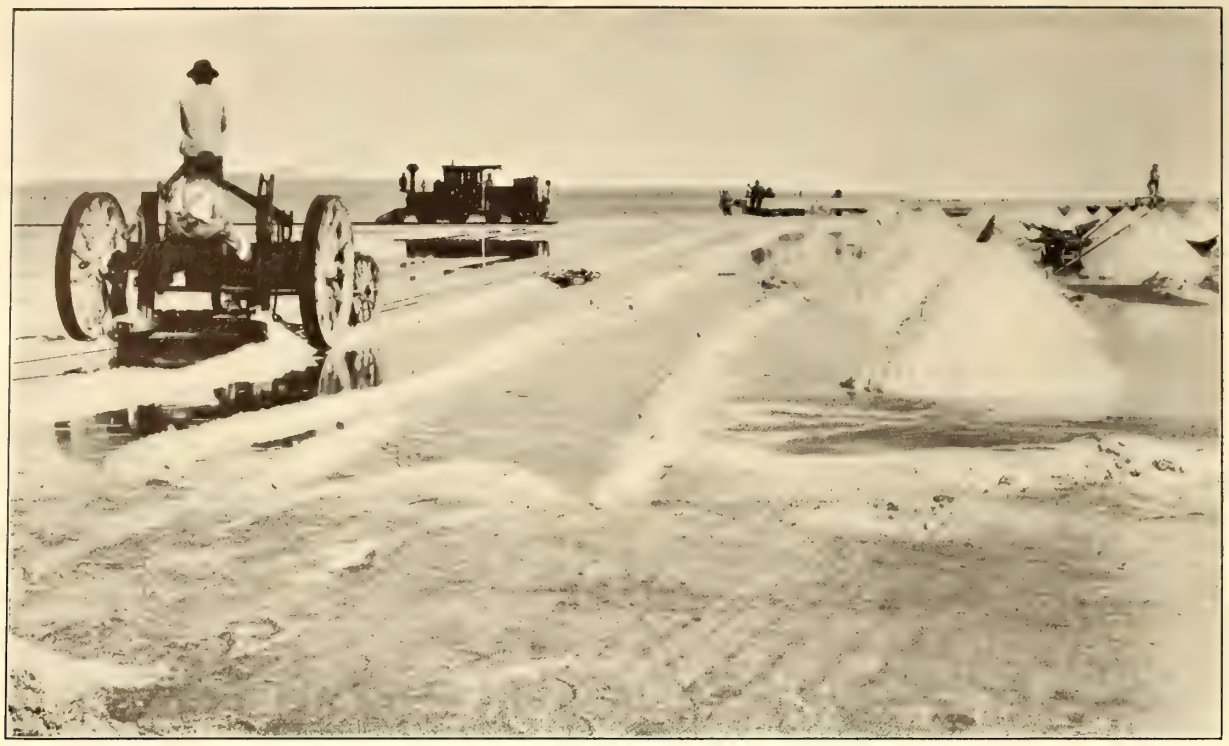
Of all the desert phenomena the so-called Salton Sea is the most remarkable. This vast basin is the last end of the desert before one reaches the divide near San Jacinto mountain and plunges down into southern California. It is a depression two hundred and eighty feet, more or less, below sea level, and for many square miles about it there is a general dip in that direction. If water breaks out of the Colorado and obtains good headway, it runs, not south to the gulf, but northwest toward Salton. Salton is a vast salt bog, remarkable for its salt. A large building has been erected there and salt made for many years in the lowest portion of the pit, nearly three hundred feet below the level of the Gulf of California. This is a most interesting country. The man who keeps his eyes open soon observes strange things. He sees an old beach, masses of shells; along the foot of the range a long, decided line, suggesting an ancient water line. He finds curious rock inclosures reaching out into the desert from the mountains that look as though they were made to hold fish. He discovers various remains of marine animals, and it dawns upon him that sometime the Salton basin, so far below sea level, has been a sea bed filled with water and possibly a part of the Gulf of California, or Cortez, as it should be called. If you talk with the Indians they will tell you that long ago a big sea came in and filled the basin and swept their tribe back into the furnace-like mountains.

About ten years ago the Indians of the Salton salt works began to grow discontented. Some threw up their work and left, others followed, and the big salt plant was in a fair way to become deserted. The Indians told the white men that once, many ages ago, the water had suddenly filled the basin; they had a legend to the effect that it would occur again, and a runner from the great river had told them to flee—that it was coming. The white men at the sink paid no attention to this, but the Indians began to leave in greater numbers, and finally the works shut down. It was learned that a mysterious rise of water was taking place in the basin. In a short time the entire area became a sea, and no one could explain why.

The extraordinary appearance of this sea, covering many square miles, created a sensation, and it was believed that the gulf had claimed its own and that a permanent inland sea had been established. The drear mountains of the desert from the railroad now appeared to be standing in the water, and the mirage added to the strangeness of the scene. Indian runners were sent out by the white people, and several enterprising men imported boats and followed up the stream, which was found to be pouring in and eating up the desert. For weeks the mystery continued. Great clouds hovered over the region, rising one thousand feet into the air, and the report gained credence that this fresh water sea would change and render humid the atmosphere, and all southern California would become tropical.

None of these things happened. The water poured in for weeks, the sea of Salton increased; but when the Colorado River went down the supply ceased, and in a few months

A Minister Making Adobe Brick Sun-Dried at a Temperature of 130 Degrees, with which to Build a Church. The Present Church is Seen in the Background, and is Called "Grace and Glory Land"



The Salton Salt Works, now Forty Feet under Water

the thirsty desert drank up the water and the desert reigned again.

It was found at this time that the Rio Colorado had broken its banks between Yuma and the gulf, and the water had poured into an old river bed not far from the line and had entered the bed of what was known as New River. From here it ran south to a dry lake, about fifty miles southwest of Yuma, about midway to the delta, then striking the dip toward Salton flowed northwest seventy-five or eighty miles, crossing the line into California, flowing parallel to the mountains. Finally, increasing in vigor, it found its way into the sink of Salton and covered it, forming a sea one hundred and forty-five miles in extent. Another river, called a branch of New River, was formed at this time that skirted the old shell or sea beach from Cook's Wells past Seven Wells, forming two great lakes, and finally flowing into Salton.

It was evident that this was not a new phenomenon, and that it would occur again when conditions were right. The expedition that determined the cause of the inflow was under the charge of a man named Patton. Up to this time an Indian had been sent out, a famous runner, to run around the sea, but he failed, as did a party of miners in a boat. They traveled one hundred miles, then returned, fearing that they would be stranded. Patton began at Yuma, sailed down the river in a skiff, with a temperature of 112 degrees in the shade. Fourteen miles below Yuma he found a break, which he entered, then passed into a slough, and after fourteen miles of that came out into a large lake near the little Indian camp of Sigeno, from which a number of rivers were carrying water to the northwest. In a word, he had struck the beginning of the sink toward Salton.

The appearance of the country here baffled description. It was evident that the desert was being licked up and the entire face of the land washed away. The main stream was twelve feet deep, and appeared to be rushing in every direction, giving the country the appearance of a vast and changing delta. The party saw the tops of tall mesquit trees above the surface at points, and the old Yuma stage road to San Diego was fifteen feet under water. Fifty miles from Yuma in a direct line, but after sailing one hundred and fifty miles of detours and runs, the navigator shot by the old stage station of Alamo Muchos. Ten miles from here he met another stream, half a mile wide and twenty feet deep. It was most erratic; now moving slowly, then without warning rushing on with frightful force. Suddenly the river turned and flowed in the direction of Yuma, coming out in a few miles into a large lake, where the water spread away, shutting out the desert completely. The stream often divided and became several rivers, forming here dangerous rapids and falls where it cut through the sand dunes. In some places the walls of the stream were one hundred feet high; again, just at the surface but everywhere, the soft treacherous sand was being eaten up—swallowed by the devastating water.

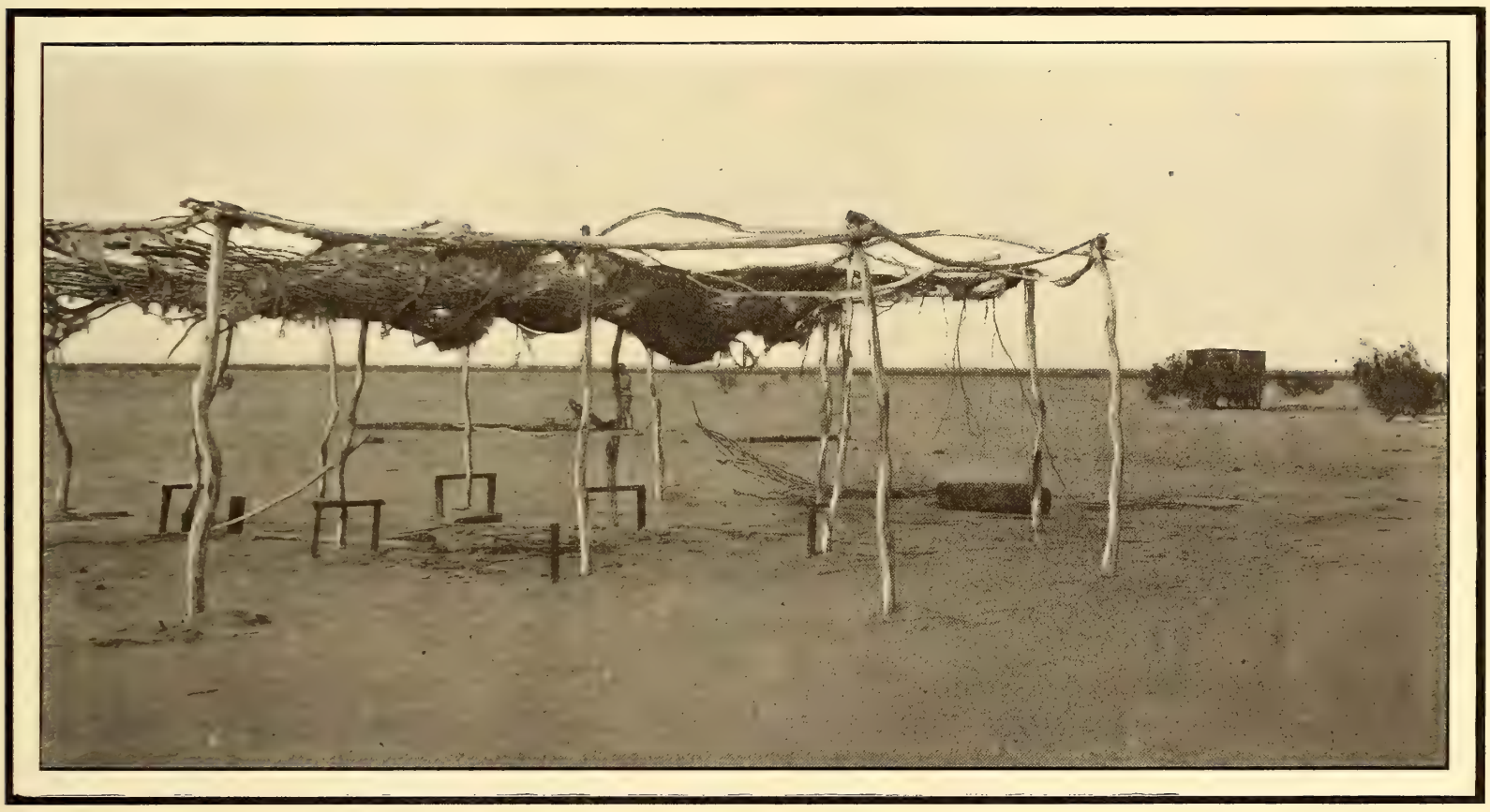
Suddenly the boat was seized by a mad current, whirled about, tossed into an enormous whirlpool, capsizing it, most

The Desert Sand Blown Up by the Wind. The Water Cut its Way through the Sand Hills to Reach Salton Sink

of the provisions being lost. They soon passed into a lake twenty-five miles square, dotted here and there with dark objects which proved to be the tops of trees. Leaving this lake by a river flowing west, they narrowly escaped a sheer fall of eighteen feet. This necessitated landing, and the boat was pulled upon the beach and the party camped here all night, observing in the morning a remarkable illustration of the illusive nature of the sand. The fall which they had landed to avoid in six hours had traveled half a mile upstream. The current was now a small edition of the Niagara River. The body of water under full force was running down the desert hill, carrying the skiff into the Salton Sea. Here it stranded on treacherous quicksand, and for hours the men worked to reach solid land under a temperature of 120 or 130 degrees. The scene was terrifying. The heat caused great evaporation, and mists were constantly rising and strange mirages forming everywhere, out of which the distant mountains rose. After a vast amount of labor the plucky boatmen reached the salt works, having demonstrated that the Salton Sea came from the overflow of the Rio Colorado through New River, making one of the most exciting trips ever made west of the Colorado.

This was ten years ago. Since then the water has disappeared and the salt works have been in operation; but again the Indians have taken to the mountains, and from Mount San Jacinto the eye rests upon a vast sea, which stretches away, covering many square miles of the desert, and is rushing down into the strange pit or sink with great velocity. Investigation has shown that a mighty stream, two hundred feet wide, is passing through the intake or canal of the California Development Company, so finding its way through several streams to the Salton Sea, that is rapidly creeping up and seriously threatening property on what has been considered safe ground. The writer interviewed a Yuma resident recently who had just come from across the desert. He said there were several breaks in the Colorado River through which water was running, and from other sources it is learned that a triangle, ninety miles on each side, is covered with water. At the desert town of Calixico there is a rushing river, a third of a mile wide and fifteen feet deep. The Salton River is equally large, and it is estimated that each is carrying over ten thousand feet a second into the Salton Sea. What the extent of damage will be can not be told. There are no bridges left in the region except those belonging to the railroad; the flood has made a clean sweep.

The trouble is due to the extraordinary rise of the Rio Colorado, and gangs of men are working on the river with pile drivers and sand bags endeavoring to divert the water, and as the river is going down the worst, possibly, is over. The Colorado has been known to rise thirty-three feet, and its flow at this time was 35,000 cubic feet per second. The writer crossed it when it was twenty-two feet high, a raging, yellow torrent, menacing in its velocity, changing the face of the country for miles. The railroad property threatened belongs to the Southern Pacific, which runs twenty-eight miles two hundred and sixty-seven feet below sea level at this point.



A Typical Desert Scene Through such Sand as this the Rio Colorado Has Made its Way. The Curious Structure is a Church

There are nine miles of track from two hundred to two hundred and fifty feet below sea level, six miles between one hundred and one hundred and fifty feet below, five miles between fifty and one hundred feet below, and about four miles fifty feet below, all of which would be at the bottom of a deep sea if the gulf should claim its own at any time, which is not within the possibilities. The total mileage of the railroad below the sea level is 60.3 miles. The bottom of the lake about three miles from the end of the salt deposit is 280.8 feet below the level of the sea.

This, in all probability, will be the last Salton Sea. The lower part of the desert has been settled, the towns of Imperial, Calixico and others have been established, and large and varied crops raised wherever water is introduced by canals; and so much capital has been invested here that before next year the banks of the Colorado will be closed to further floods, and the Salton Sea, dissipated in the hot air of the desert, will become a memory, to be told to generations to come as a modern flood.

The Adventures of a Woman Who Hunts Big Game in the West

With Some Practical Suggestions to the Woman Who Camps

By Myra Emmons

FOR the city man and woman modern big game hunting is one of the most expensive sports. The encroachments of man have driven the small remnant of big game into far fields, where it can be reached only by costly journeys. Guides and helpers are necessary, and they charge well for their services, though not more than they are worth. Camp outfits are expensive, especially when women are in the party. As for horses it is cheapest to buy them outright, before starting, and take chances of selling them on returning from the trip. Only a tenderfoot will equip himself with elaborate guns and natty togs, but no one goes hunting nowadays without a camera; and enthusiasts who know the importance of a good lense often spend hundreds of dollars on their photographic outfits.

For these reasons one woman, who has won in the wildest parts of this country big game trophies which sportsmen envy, has carried off the palm of feminine experience in outdoor life. She is Mrs. W. E. Bemis, of New York and Larchmont Manor. Naturally, big game hunting is a phase of outdoor life available to women only when some man of the family acts as a companion; and in Mrs. Bemis' case that companion was her husband.

The Jackson Hole country, Wyoming, is the first place recommended to the seeker after big game. The tenderfoot may never have heard of the place before, but if he becomes possessed of the desire to own an elk head, obtained by his personal skill, and begins to inquire how, he will soon be talking fluently of Jackson Hole and the Teton Mountains, because that region is the great feeding ground of the elk. They have been killed off in other parts of the country, but Jackson Hole is south of Yellowstone Park, where all wild animals are perpetually protected by law. Under this protection their numbers increase, and many of them stray outside of the Park, thus stocking the adjacent regions, and especially Jackson Hole. Once beyond the Park, the animals become, in proper season, legitimate game for sportsmen.

To Jackson Hole, therefore, Mr. and Mrs. Bemis made their first trip for elk. Mountain travel on horseback is fatiguing and often perilous for men, and much more so for women. Guides insist that the women shall ride astride; and the city woman, new to the dangers, is only too glad to safeguard herself in every possible way. Trails lie straight up the mountains, over down timber, jagged rocks, foaming streams, jutting crags and precipitous canyons. The worst feature of a climb in the Rocky Mountains is the slide rock, a shale that breaks off in slabs of all sizes, which slip around over one another with the most alarming and treacherous ease, making progress a fearful strain on the horses as well as taxing the nerves of the rider. Besides, there is always the possibility that a horse may slip back down the trail, carrying himself and rider to a frightful death.

Mrs. Bemis' first chance for a shot came after she had spent an entire day in the saddle and was exhausted, but she insisted on trying for it, which is probably more than many

Making a Pie in the Camp

Frozen In

men would have attempted. She started down the canyon with one guide, her husband and the other guide remaining to make camp. It took an hour to get down, the horses cautious, yet slipping and stumbling in the dusk. At one place they crossed a bog punctured with gopher holes. A step in one of them would mean a broken leg for the horse and unknown misery for all the party. At the foot of the canyon the riders dismounted, tied their horses, shed their coats and all possible impedimenta, and climbed to the ridge where the elk had been seen. The strain, heat and dust of such a climb are indescribable, but once up Mrs. Bemis was near enough for a shot. Dark as it was in the twilight, her first one found its mark.

Before the guide could finish dressing the buck, which proved to be a nine-pointer, the chill of the mountain night was upon them. The camp was at least seven miles away. It was hours, and the inky dark, before a wearied, bruised, half-frozen, aching hunstwoman came within sight of the camp fire; and when she crawled into her bed after supper it was with the firm conviction that she would never be able to rise again. At daylight, however, she was up again and after the other elk which the law allowed her. He proved to be a twelve-point bull, with massive antlers. But that is, after all, nothing for a woman who is a natural shot, and has a record at the trap of 19 clay birds out of 21, at 25 yards' rise.

Mr. and Mrs. Bemis made one hunting trip with Mr. and Mrs. Ernest Thompson Seton into what is known as the Clearwater country, in the Bitter Root Mountains of Idaho. The traveling in that region is indescribably rough. Wyoming is a peaceful valley compared with Idaho. No tenderfoot should ever make his first hunting trip in that district unless he has extreme powers of endurance. In her attempt to get a bear Mrs. Bemis was left alone, one afternoon, on a mountain side, while the men pursued a wounded bear. While she was waiting a huge cinnamon bear walked out from the bushes, twenty feet in front of her, his jaws dripping with the juice of sarvis berries, his head swaying from side to side. She thought he was the wounded one, and that he had been driven around in a circle. Half paralyzed by his sudden appearance she fired five shots at the huge, lumbering bulk without any effect. Two more shells were left in her rifle. As she drew down on him with desperate determination for the next shot he loped off into the bushes and disappeared. Evidently he had not located the direction of the shots and was simply seeking to escape under cover. It might have been a relief to see him go, but realizing that she was alone on the side of an almost perpendicular mountain covered with slide rock, and that she was surrounded by five bears, one of them wounded, also that she must remain until the men should return to find her, in sheer desperation she made all the noise she could to keep off the enemy, rolling rocks down the mountain and calling. She was thus engaged when she heard the shouts of the returning men.

On the Idaho trip Mr. and Mrs. Bemis tried hard to bag a mountain goat, which means the highest and most dangerous climbing that can be imagined. It may also mean sleeping all night near the summit, without food, tent, bedding or other protection than a solitary blanket; blistered feet, aching bones, terrifying hazards, torturing heat on the climb during the day, and at night a bed in a snowbank; and, alas! it usually means a vain quest.

Experiences in the Jackson Hole Hunting Region

"One of our most alarming experiences," said Mrs. Bemis, "was a ride we were forced to take through a burning forest. On every side the flames snatched at us, and, worst of all, from the ground. Burning logs lay across the trail, and over them the horses had to step or jump. A log two feet in diameter, covered with leaping flames, does not make an alluring hurdle. My horse took them bravely and steadily, but I was afraid my skirt would catch fire, and I was kept busy holding it away from the flames. I was also afraid my horse's tail would be burned, and I kept watching to save him from that.

"Burning trees were falling all around us, across the trail and in every direction. The guides went ahead of us, striking the trees we were to pass to see if they were yet ready to fall, and to guard, if possible, against our being struck by one on its descent. Even with that precaution we were liable

After a Hard Day of Unsuccessful Hunting

to be killed by the crash of some large burning trunk. We rode thus for hours, and when we finally reached the open we were exhausted.

"When we went back over the same trail later, after the fire had completed its ravages and died out, we found the route almost impassable. The trail was blocked at almost every step by fallen trees lying in every direction. Any one of them might have given us a death blow."

The riding costume which this daring woman wears in the mountains is a divided skirt of gray or brown covert cloth and a shirt waist. Her regular hunting suit is of corduroy trimmed with flat bands of soft leather, which also serve to reinforce it; but corduroy is too heavy for the divided skirt, which is partly double. Each suit is made with a jacket; but these are seldom worn, as a knit woolen jersey blouse is the ideal garment to slip on over a shirt waist. Knickers are also useful at times.

A heavy felt hat, with a wide, stiff brim, is the best headgear to wear when riding through woods or brush, as the brim is a great protection to the face. In the open the wide brim is a nuisance, for it catches all the wind. It should then be discarded for a smaller hat of soft felt with just enough brim to shield the eyes from the sun.

A woman who would hunt big game must be alert and uncomplaining. Men usually take her under protest, or, at best, with serious apprehensions; hence she must not only refrain from adding to their cares, but she must prove herself a source of joy by being quick to see and point out every attractive feature of the trip. She must be ready for any emergency and must have a disposition that saints will envy. In return she gets a new stock of health and vigor and a new point of view toward the world.

Ready to Leave Goat Camp

Fantail Camp, on Bear Creek

The Modern Entomologist

THE modern entomologist has become one of the most valuable and important agents of modern life. The elder folk of to-day, who recall the insect-collecting epochs of their early youth, no doubt regard the evolution of the contemporary "insect man" as one of the marvels of our time. And quite rightly. The modern entomologist knows many things which his predecessors did not dream of. He knows how useful some insects are and he is keenly alive to the dangers of others. His work in both fields has been of extraordinary value and utility. The study of the insect world has yielded great results, and future researches promise to be even more notable and sensational in the facts that will be discovered and the good that will follow. Insects are now pitted against other insects. The dangerous qualities of such insects as mosquitoes have been established beyond controversy. The insect kingdom has not yet been mastered. There is much still to learn, many facts yet to be discovered, foes unearthed, remedies applied; but the whole tendency of modern entomological work is forward in a very true sense, with notable returns and work of incalculable value achieved.

Science for the Home

Winter Sanitation

THE observance of sanitary rules are apt to be considered more pressing in summer than in winter, yet it is quite as essential to be on guard against sanitary dangers in the cold season as in the warm months. The ventilation problem, for example, is much more difficult of solution in winter than in summer, and is frequently neglected altogether. Most houses are ventilated in the summer without any care, and often without any thought; the windows are open constantly: what more can be needed? Perhaps little enough at that season, but the situation is very different in winter, when the windows must be kept closed and when many houses are all but hymetrically sealed. An expensively-built house will be provided with the means of artificial ventilation which will permit the interior air to be kept in good condition without trouble; but a house without any ventilation system needs to be thoroughly aired daily. This airing should be ample and sufficient, the free air blowing through the rooms long enough to effect a complete change and remove all unpleasant odors. The kitchen odors must be entirely eradicated or the house will seem offensive to every one coming into it. It is an unfortunate truth that many houses are insufficiently aired and ventilated in the winter months, because a complete airing of the rooms is deemed unnecessary or from a mistaken fear of catching cold.

That the heating system is essentially connected with the ventilation of the house is well understood. Most houses depend on the heating apparatus for their winter ventilation. In this connection it may be pointed out that it is essential that the outdoor air brought into the house through the heater be obtained from a pure source, and that all sources of foulness be removed from around the intake. The house should not be overheated, a common error which is seldom avoided, but the neglect of which unquestionably occasions much disease. That most houses are too dry in winter was pointed out in this department last month.

The structure of the house does not escape attention at this season. Windows and doors must be in good condition. If the situation is exposed double windows will be required on the windy sides. This is the time of year that the roofs are submitted to their severest tests, although the most difficult season may be that of the thaws in spring. But the householder who has neglected his roofs before the winter sets in will find that he has practised a false economy, and will doubtless spend some painful hours in trying to correct errors that can not be well corrected in the cold season. That water pipes, heater pipes and even gas pipes will freeze at any time is lamentably likely to happen in the best ordered household. Much can be done by proper foresight, and nothing should be left undone that might in any way help in the avoidance of these most awkward of all domestic catastrophies.

If a house is closed during the winter an expert plumber or sanitarian should be called in, that everything be left in proper shape. It will often be found as necessary to prepare the plumbing for the winter as any other part of the house is prepared, and the money spent for this purpose is often well spent. Sewer gas is very liable to be generated in unused plumbing apparatus, and too much care can not be taken to avoid it.

Fires in Country Homes

No house, however well built, is absolutely proof against fire. The fireproof house is no longer a theoretical structure, it is true, and many houses are built either on the fireproof or slow-burning system; but every house contains large quantities of inflammable material; there is danger from the heater, or carelessness in the kitchen; the electric wiring may be improperly insulated; there are many ways in which the best of houses may suffer injury from fire, and a very serious and real problem that confronts every owner of a country home is protection against fire.

In many cases this must be a personal protection; that is to say, one for which the owner is personally responsible, a protection service installed by himself and manned and applied by his own people. This is particularly true of isolated houses, situated at some distance from any fire station, and wholly dependent on local or immediate sources of water supply.

The volunteer fire departments, while unquestionably the best that many vital communities can afford, are inherently deficient in the efficiency of a paid force. The members are scattered; they can not immediately respond to calls made upon them; they may not even be at home when the alarm is given; the alarm system itself may be inefficient; the apparatus may not be kept up to date; there may not be sufficient hose; there are many serious criticisms that can be made of these organizations, although the intentions of the members and subscribers may be of the best, and the protection intended to be given arranged on the most available plan. The faults are not the faults of the volunteers, but of the system under which they necessarily labor.

Owners of large houses, therefore, will do well to provide their own fire apparatus, at least to a considerable extent. There should be a double water supply, one within and one without the house. There should be an ample supply of hose and a number of chemical fire extinguishers. A ladder mounted on wheels and kept outside the house may be found necessary at critical times. There should be force pumps for directing streams of water against the fire. In short, every reasonable and proper protection should be arranged for.

Perhaps even more important than the apparatus is the knowledge of its use. It is quite useless to supply apparatus if it is not known how it will be used. Fire drills are therefore important, especially if a large number of servants are kept. Every man should know just what is expected of him in such an emergency and just what he is to do. The drills should include the actual use of the apparatus as well as the part each one is expected to take.

In smaller houses less elaborate provision against fire will be made, but only because of the expense of installing much apparatus. In any event, every country house should be provided with some sort of fire extinguishing apparatus which is at least as effective as far as it goes. It should be conveniently placed and its workings understood by every one.

The Garden

The Garden Month by Month—December

THE end of the calendar year serves to strengthen the impression that the flower gardener has been gathering during the past month, that for him and for her there is little rest. The flower lover must be consistent and love her flowers the whole year. There are no periods of rest, no times of respite. The work varies from month to month; in one month it will be more laborious than others, but there is always something to do, always care to be expended, always trouble to be taken.

To the genuine flower lover these are matters of small moment, yet it is well to refer to them, since not a few persons have the notion that flower-growing is an easy art, an occupation for delicate women or fragile old folk. Nothing could be further from the truth; for it is a laborious, constant task, entailing work at all seasons, and in season and out of season. It has, however, superb recompenses, and these more than compensate for any effort put forth.

The winter months are trying times to the amateur flower grower, especially to those who have no good or proper place in which to rear plants. House plants, even of the commonest sorts, are difficult to maintain through the cold weather. There are two causes which render house culture exceedingly difficult. One is the presence of gas within the house, with which must be joined the absence of moisture; and the other is the great difference which may exist in the temperature of the rooms in day and night, or even in different days.

It is impossible to suggest remedies for these matters which will have any universal application, or which will be generally or specifically effective. The single, practical suggestion that is available is to do the best that can be done. Gas is readily detected by most persons, but human beings appear able to survive its injurious effect more easily than plants do. When a house is heated by hot air, special pains must be taken to immediately get rid of coal gas the moment it comes up into the rooms or serious and permanent injury will be inflicted upon the plants.

A proper supply of moisture is more difficult to regulate, since the importance of this feature of the winter house is less understood and less generally regulated. Few plants will survive a winter in a dry atmosphere. It is a matter that can not be regulated by merely pouring water on the pots and is a difficult subject at all times.

Variations in temperature are also difficult to control. Most houses are colder at night than in the daytime. The relationship this bears to plants is simply that some will survive quite radical changes, while others will not. Delicate plants will rarely survive many changes of temperature, no matter how well other conditions may be met.

House plants, even with the best of care, easily wear out and become unfit for use. This applies in large houses, where there are house gardeners, as well as to more modest surroundings. It is always a safe rule not to try to keep too many plants over the winter, and especially not to expect too much life from them. It is a pity to discard a good plant; but even a few weeks of association with it will give satisfaction, and the next venture may be more successful.

Winter Work

WHEN unable to work in the garden—think about it. There is no better advice for the winter months, and there is nothing more agreeable that one can do. The great aim of garden making is the creation of beauty. There is no such thing as failure in garden-making, for any garden which is not a success is not a garden at all, but a failure. It is a very sad failure, too, for its ill-success is visible evidence of neglected opportunities. Moreover, the most discouraged of us would fain hide one's failures and not blazen them forth to the world. The unsuccessful garden, unfortunately, may readily be seen.

Now, to make a garden a success it is necessary to carefully plan every part of it. Just as the architect will draw out every detail of the house he is building before the foundations are dug, so the garden-maker must think out his plans, commit them to paper, criticise them, perhaps begin afresh, and so on with continual labor and improvement, hoping that each new change will be a betterment, and not discouraged because his paper plans can be thrown to one side and new ones begun without any special loss.

If one happens to be a beginner there is a host of things to learn. And there are many ways in which this knowledge may be acquired. Too many. One speedily feels for the books, papers, magazines and catalogues which are dedicated to the garden art are filled to the brim with fascinating information—so fascinating that one's modest dreams are speedily shattered, and on their crumbling fragments are reared gardens of ravishing beauty destined to rival those of legend and poetry. The garden enthusiast soon becomes a garden dreamer. He fills his garden with all sorts of beautiful, rare plants, plants difficult to grow, plants of unusual character, but all so easy—once one has the knack of raising them and the patience to follow the cultural directions.

All this is an agreeable pastime for the winter months, but before the snows and frosts have thawed away it will be well to come down to mother earth, dispense with the intoxication of flower dreams, and reduce one's ideas to a careful order, keeping well within the beaten track and not trying too much. In a second or a third year more may be done; but as a starter, try as little as you can.

In practical work the garden maker finds little to do in the winter. The growing plants should be carefully watched and an occasional glance given to the dry roots in the cellar. Growing plants that are developing should be turned from time to time to insure symmetrical growth. Dead leaves should be taken off; parts that seem to promise undue development should be pinched; little water is needed, but the plants should not be permitted to dry out. Hanging plants, which always need more water than those in pots, should be dipped and allowed to absorb all they can. Sunshine should be permitted abundantly, the plants being moved if all do not receive an equal share. Do not water the roots of cannas or dahlias, and cut off promptly any diseased parts of canna roots. A keen watch must be kept for insect pests at all seasons and must be got rid of at all costs. This last is the most tiresome kind of garden work but the most necessary.

Civic Betterment

Private Work for the Public Good

THE doing of public work at private expense, a work which benefits the person who meets the cost, as well as the general public which is benefited by it, raises some interesting questions. Are such expenditures justified? If a wealthy property owner desires some piece of public work performed, a street or road laid out, a job of paving, a row of trees planted, or any sort of work which while useful to him is also of permanent benefit to others or to a locality, a very obvious way is to have it done at his own cost. The method is obvious, of course, to those who do not have to foot the bill, but the wisdom of permitting such undertakings can readily be questioned.

Every community has a responsibility to itself. The fundamental idea of local self-government is that the local body shall duly care for the lives and property included within the limits of its powers. The political body must assume full responsibility for everything committed to it. This responsibility is avoided if public improvements are left to the initiative of private parties, be their intentions what they may.

The question behind such work is really larger than the immediate necessity of having it done. That may be urgent enough, and from the point of view of the benefactor proposing the betterment it may be exactly the thing he most wishes to do. Operations of this sort lead to the pauperization of communities. The avoidance of responsibility becomes a public policy, and instead of general progress there is general retardation. The rich man becomes wearied of continually benefiting a community that shows no disposition to help itself.

A very different class of benefactions includes gifts to a community. The donor of a park bears exactly the same relationship to a community as the donor of a picture to an art gallery, or the donor of a statue to a town. All are benefactors, all do good in making their gifts, and all are alike entitled to the grateful thanks of the community which accepts their offerings. There are few public benefactions more useful or more noble than the gift of a public park, and it is an interesting fact that such gifts are becoming much more frequent than was formerly the case. It is a fine indication of good public interest in the outdoor life.

Public improvements of personal benefit chiefly are to be ranked in a different class. A man who arranges a great estate at some distance from the line of communication must necessarily build roads for his own special use. Such roads may remain private highways for many years, but if used by the public at large are public works of more or less general importance. They constitute an expense that may rightly be expected of a landowner, since no one save himself is especially interested in them or is served by them.

No community should undertake a public improvement and leave its completion to private hands. This is a particularly ignoble thing to do, yet it is frequently happening in very excellent localities. Public improvements are sometimes permitted to drag along so long that people grow tired of them and put the unfinished streets and squares in order to get rid of the unsightly sights. It is a very mean piece of public "graft," and quite uncalled-for. Self-respect is quite as necessary in matters of this kind as in personal affairs. The community can not afford to accept gifts that may entail unexpected returns at some future time.

Public Sport

ONE of the most interesting phases of a better civic life is indicated by the increased attention given by many American communities to providing opportunities for free recreation as an essential part of the public expenditures and hence as an essential part of the public life. The progress made in this direction in the last few years has been remarkable. It is a movement that has had development in a number of directions, most of which have been without any related thought, and yet the sum total, as represented by public appropriations and by opportunities afforded, has reached handsome proportions and represents a vast amount of opportunities for good which may be freely availed of by every one at no individual cost.

Some figures representing the annual expenditures of the city of New York for recreation purposes will show how far this movement has progressed in the metropolis and explain how varied are the interests concerned: For music in the parks, $50,924; music on recreation piers, $70,206; maintenance of recreation piers, $74,574; Central Park menageries, $30,500; Bronx Zoological Garden, $134,905; Aquarium, $41,500; Brooklyn Museum, $70,000; Metropolitan Museum of Art and American Museum of Natural History, $310,000; Harlem Speedway, $18,600; playgrounds, baths, etc., in parks, $61,000; other bathing and swimming facilities, $165,540. These figures do not include expenditures for parks, recreation expenditures by the Board of Education, and other items which might properly be included under this general head, but they illustrate sufficiently the very large appropriations New York makes toward this end, as well as the varied interests represented in this expenditure.

As a matter of fact, the recreation facilities freely afforded the people in New York are much more extensive, since private enterprise has not lagged behind public leadership, and in a number of cases the public appropriation has superseded and expended moneys previously provided by private means. The exhibit is an interesting one in itself and also as an indication of a very pronounced modern tendency. It means a positive recognition of the value of sport and play in civic life. It means that play as well as work is recognized, and handsomely recognized, as having distinct civic worth. It means that not only the children but the grown folk as well must have opportunities for healthful recreation in our crowded cities, recreation that they can not supply themselves with alone, but for which public opportunities must be provided.

It is a movement of the utmost significance, because it indicates a new departure in public life, a new conception of the relationship that should exist between the municipality and the people who live in it. It would be too much to commend all the disbursements of New York under this head as wise and good, but the underlying idea is of the very best. It is noble work that, within certain somewhat narrow limits, is well done. The future, in this direction, is very bright.

The Observer's Note-Book

Architects, Old and New

THERE are many ways in which people who build houses may be classified. For the present purpose we may consider them from the one point of view, those that hate architects and those that do not. It is amazing how widespread is the prejudice which often exists against architects. Some one—the prejudice is so old it may be antediluvian—seems to have started the notion that architects were unnecessary incumbrances of the earth. Very excellent buildings indeed may be pointed out—even to-day—of whom the architect is quite unknown and perhaps always will be unknown.

The inference is logical and obvious: they were built without architects. "Name me the architect," is the triumphal demand, "and I will admit an architect did this work." But it is sometimes impossible to do that, and thus the supporter of the non-architect theory retains his own views and his own appreciation of his mental discernment.

There are some people it is impossible to argue with. You meet them every day. Their knowledge is abundant, penetrating, self-satisfying and whole-absorbing. It is doubtless a fine frame of mind to have, for there are many persons who know so little, that to meet one who knows surely, positively and really gives a freshness to life that is as invigorating as it is rare. The architect haters come in this class. It is useless to talk with them, for they KNOW—spelled in the largest letters, Mr. Printer, if you please. There is literally no room for converts here, but it may not be useless to review the general situation as a possible help to the non-diffusion of such notions.

It seems to be an historic fact, that the cataloguing of architects, their ways, their means, their deeds, their relations to buildings, their personal efforts, their contribution to knowledge, science and art, is a comparatively modern thing. The word architect itself is comparatively modern, and no one will dare say for certain just what sort of a person the architect of classic and of medieval times was.

If he was anything like the modern article, he was a cultivated, agreeable gentleman, of polished manners, knowing more of building than of anything else, a charming fellow to know and quite well satisfied with himself, and with others also if he had a multiplicity of jobs. In all these matters he may have had a close resemblance to the modern architect, but it will be safe to affirm that he earned his wages by more personal exertion. He very likely did not have a staff of office assistants who took the drudgery of labor from his shoulders, who did all the work, while he got all the glory. Whatever he was he was a hard-working man, himself daily on the scaffold, directing and working, in charge of everything, but fully capable and competent to do everything himself.

The modern architect is very different. He has the singular advantage of being required only to work with his head. He does not do things himself, but he tells others what to do. He does not have to find out things, but he asks others about them and puts the charge for acquiring this knowledge into his little bill, which the client duly pays. His mental efforts may be accomplished with little visible exertion, but the final results are eminently visible, being, in fact, structures of permanent material which are set up on the face of the earth and destined to last a considerable time.

This is a very agreeable operation, for it aids in spreading forth his fame and perhaps wins him new clients. The latter result does not always follow, for his achievements may not be pleasing and no one may want any more of it. This is a distressing state of affairs, and one difficult to remedy, for an architect without clients is as a poet without readers; that is to say, unappreciated, unknown, without means of support.

But getting back to older architects, it may be pointed out that the contention that the medieval cathedrals had no architects has long been punctured as an absurd legend without force or truth to support it. It is true enough they had no single architect, as most modern buildings have, but the records of the past have yielded up many an old craftsman who was master builder of the church with which his name has now come to be associated. This, at least, we know positively, and we should have known it intuitively, since never was an idea more absurd than that the great churches of the medieval period—the most glorious structures in stone ever built by human hands—simply were built, without directing guidance and without definite end and aim.

So we know there were architects, for such the master builder must have been; but we know less of his actual relationship to the work, less as to what he actually did, less as to his own personal part in the planning and building. Here, of course, we have no guide, and can only depend on conjecture—a sorry enough leader, but all we have. It is safe, however, to assume that the master builder's part was an important one. He did not sit down and draw out the whole structure by rule and compass. He did not design, or have designed by his draftsmen, designs for ornament and detail, which is now the usual course in every architect's office. He perhaps did not concern himself with sanitation, for of that science no one, in his day, knew anything at all. He knew nothing of science, for science is modern and belongs to our own time. But he knew how to build, for his buildings tell us so; and he knew how to build permanently, for many of them have lasted a prodigious time—longer than many of us want the works of some modern architects to last.

He was, therefore, a real person, doing real work, doing it finely, often with true genius, and generally in a way that has excited the universal admiration of all who have seen it, old and young, medieval and modern. But it was the work itself which excited interest, not the architect himself. He, poor chap, fell into forgottenness, and only his bare name has been recovered in our own time through patient toil and skilled study.

The modern architect thinks of himself first. Show him a new building, and his first question will be, Who was the architect? And if he doesn't happen to like that architect he will immediately tell you—not for publication—what he did that was bad, and what he ought to have done which he hadn't. If the building has real merit, that may be referred to last, but often in a grudging spirit, as though some other —unnamed person—could have done better had he been afforded an opportunity.

Perhaps he could. There is often room for betterment in this vale of woe and sea of tears we call mother earth. The point is of value chiefly as illustrating the horrid modern spirit which too often dominates things architectural and sets people against architects. Any man who does anything is entitled to credit for what he has done. If an architect builds a good building, by all means give him all the praise, all the commendation, all the reward possible.

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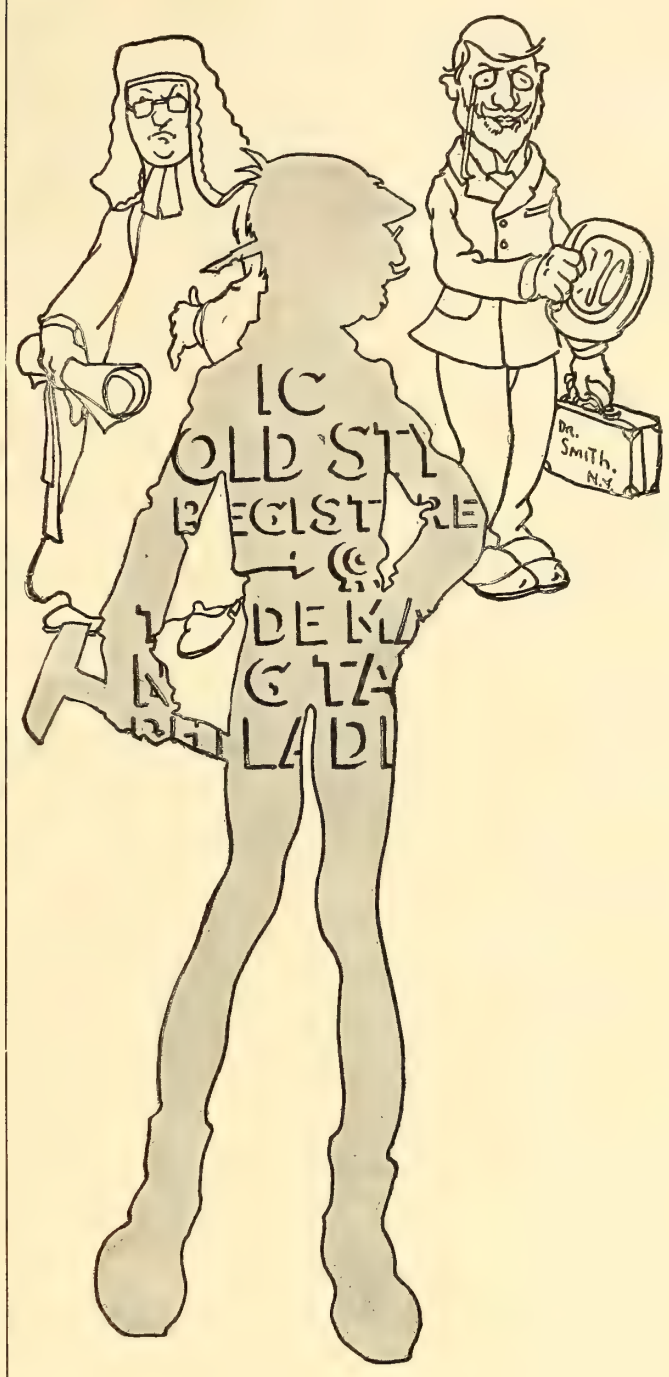

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THE HOME TELEPHONE

PERHAPS no modern aid to housekeeping is so keenly appreciated as the telephone. It is an amazing convenience and help. It saves time. It keeps one easily in touch with the outer world. It effects an economy of steps. It is useful in a hundred useful ways. It is so extremely useful that the wonder is, not that so many houses and apartments are equipped with telephones, but that more of them are not in use.

The telephone, however, has its disadvantages, and it is exactly on this point that the housekeeper needs to be watchful. The telephone is a time-saver, but in many instances it means a larger expenditure. This is especially the case where orders for household supplies are transmitted through it. The butcher, the baker, the grocer, all welcome the telephone with eager joy. They can attend to a dozen telephone calls while personally taking the orders of a third as many customers. The goods sent in response to telephone orders are almost invariably taken in and seldom returned. The butcher is perhaps most keenly alive to the advantages of the telephone order system, for he can send in a little more meat than has been ordered, or, at a pinch, send something quite different and which the customer would not have taken had she been making the purchase in his store.

Nor does one always keep as close an account of telephone orders as those given in person. Telephone orders are seldom booked or noted at the time by the customer, and hence one is not always aware of the bills one is incurring. Not that charges will be made that have not been ordered—reputable tradesmen must be given the credit of being honest—but one is not apt to fully realize just what one's expenses may be.

The telephone, therefore, like all good things, requires to be carefully and intelligently managed. The most economical mode of housekeeping is expensive, and while the telephone will save time and trouble it also calls for care and attention in its use. No one can keep house economically without a careful scrutiny of expenditures. One is apt not to do this when using the telephone for transmitting orders for household supplies. Yet this is one of the most important things to be kept in mind when using this implement.

CORRESPONDENCE

"Notable Homes" Series

H. M. Y. writes to protest against some of the illustrations of the interiors of the houses included in the series of papers on "Notable American Homes" as not being in accord with good taste, and containing not a few articles, from time to time, that are thoroughly bad in themselves.

Reply. The writer of this letter entirely misconstrues the purpose of the papers in question. The houses included in that series are not offered as examples of good architecture, good decoration, good furnishing, good gardening; they are not intended to serve as models; they are simply descriptions of houses, mostly of some size, which have some points of interest. They illustrate, in a general way, the most important domestic work being done to-day by our leading architects. That is to say, the largest houses, frequently the most costly houses, often the best work of the architects under discussion.

This programme is a fair and just one and needs no defense. Large houses and large estates are matters of very great public interest. There are few things of greater general interest than those the public can not gain access to and of which it knows nothing. Large houses and large estates to which only a com-

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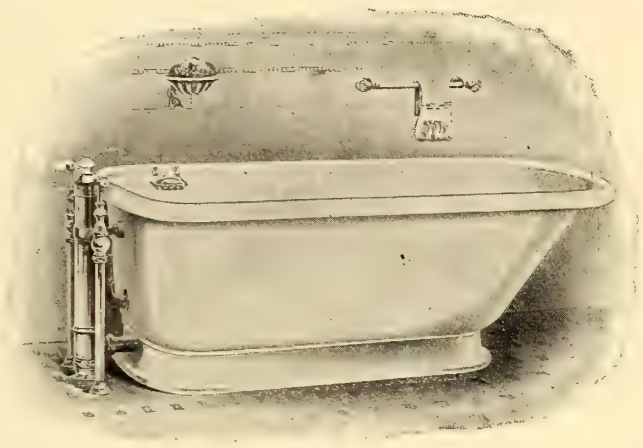

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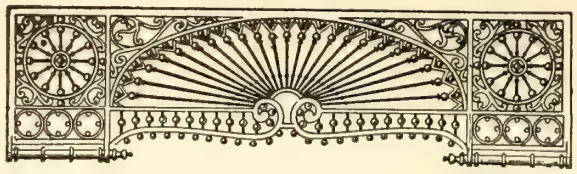

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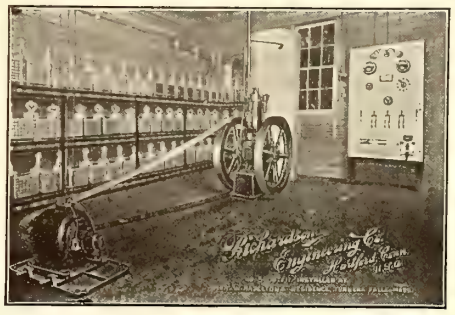

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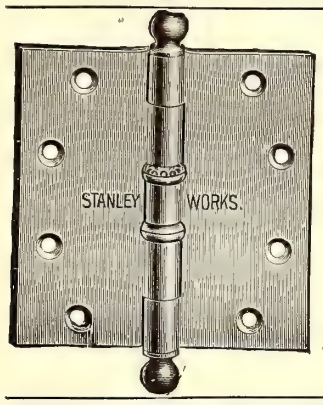

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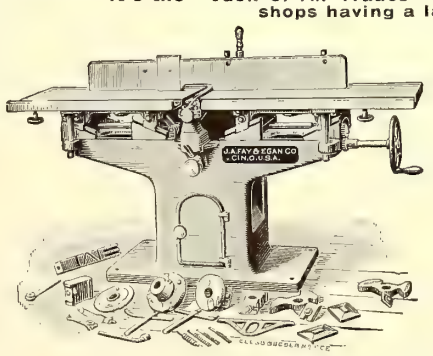

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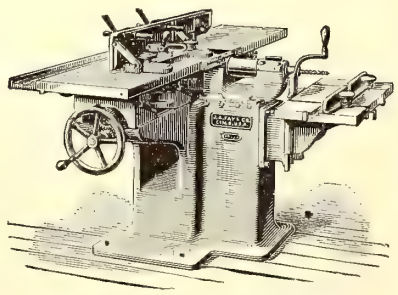

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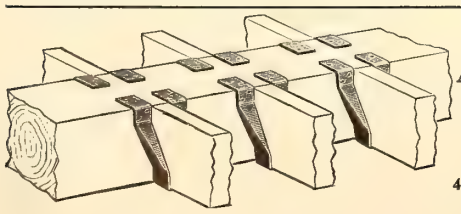

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paratively few can have entrance are buildings and places that excite the utmost curiosity.

Were these houses possessed of no interest as houses, had they no architectural merit, were they not interesting to see within as well as without, it would be simply catering to a natural curiosity to include them in the contents of this magazine. It would be giving a fictitious interest to our pages. But, as a matter of fact, these houses have other points of interest. The building of a large house calls forth the finest skill of the expert architect. Many of these buildings are thoroughly notable as examples of domestic architecture, many of them have the deepest interest as types of contemporary dwellings, and in many ways are worthy of serious study, quite apart from the fact that a Mr. A or Mr. B lives in them, or that the house is simply big, or that the estate includes so many acres.

As a matter of fact, the creation of a great modern estate calls for the best that the creating and governing mind can give. Let it be granted that some large houses to-day are built that have not the interest that should be the result of large expenditure. This still happens, and is likely to happen for some time to come. But the actual number of such instances is rapidly decreasing. Hence there are very few "great" houses that are devoid of interest, very few that, as houses, have not real interest to the general reader as well as to the architect.

Most large property owners are content to leave the external design and the entire structural design to their architects. A very different condition prevails as to the furnishings and interior decorations. A highly trained and skilful architect may be commissioned to design a house, and the furnishing given to another party or undertaken by the owners themselves. Architects often supervise the furnishings of a house, but not always, and it would be exceedingly unfair to attribute to any architect the effect of the furnishing of a house unless this work was positively known to be his.

Hence the astonishing crudities and anachronisms that are frequently seen in photographs of house interiors, large and small, modest and great. It is impossible to tell how these objects found their present resting places, nor the circumstances under which they were obtained. If any one, as our correspondent, does not like them, it is a matter of congratulation for the superior discernment in questions of furnishings. But if you happen not to like a particular lamp, let us suggest, do not blame AMERICAN HOMES AND GARDENS for it.

There is another question suggested by our correspondent's letter which might be referred to here. Mr. Ferree's articles are descriptive and not critical. The difference between a descriptive article and a critical one is very great. The scope of each is distinct, and completely so. These articles are based on personal visits to the houses described, supplemented, in most cases, with talks with the owners and the architects. It is impossible to prepare critical articles under such circumstances. One can not go into another's house for the purpose of describing it in a magazine and then find fault with what one sees. Our correspondent should be aware of this without expressing surprise that no criticism is offered. This series of descriptions of "Notable American Homes" is notable not only because the houses illustrated in it are notable, but because the articles themselves are notable. These descriptions are by far the most complete that are being published to-day, and AMERICAN HOMES AND GARDENS believes they give pleasure to its many readers and add greatly to the interest of its pages.—EDITOR.

FIFTY SUGGESTIONS FOR THE HOUSE

22. The Size of Rooms

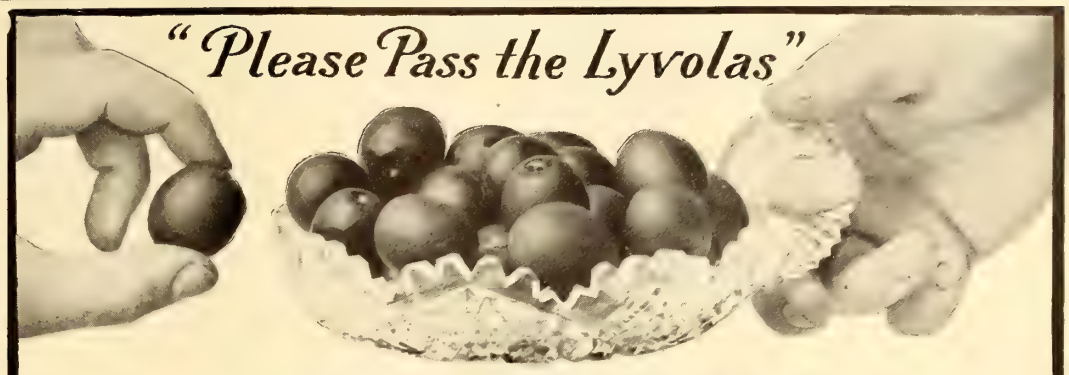
THE point of greatest hygienic importance is, not how many rooms a person has, but how much room. A small room may be overcrowded with a single person in it, while a large room is not overcrowded with four to six persons in it. The question of the dimensions of the room is of the greatest importance. The minimum amount of cubic space allowable for sleeping-rooms per adult person is 10 cubic meters, though a room of 25 cubic meters is far more desirable. It is evident that a room 3 meters high is more easily ventilated than one that is 10 meters high with the same amount of air space. Sleeping-rooms should be at least 2.75 meters high, though a height much in excess of 3 meters is not desirable. A room less than 2 meters in height is not suitable for a sleeping-room. The floor space of a sleeping-room should be at least 3 square meters. The living-rooms of a house should possess a cubic space of at least 12 cubic meters for each occupant, though an allowance of 30 cubic meters is preferable.—Dr. D. H. Burgey.

23. Ventilating the Billiard-room

A BILLIARD-ROOM is very often difficult to ventilate because of the large amount of glass in the lantern which is necessary for lighting the table, and the enormous quantity of gas which is necessary for lighting. The first thing which should be done, wherever possible, is to substitute electricity for gas; this will simplify matters considerably. In order to prevent a down draught from the cold air round the glass, a "lay-light," or horizontal glass ceiling, may be placed below the lantern, and the space thus formed warmed by a coil of hot-water pipes, so as to rouse an up current, which can be taken through an ordinary extract ventilator. Fresh air should, of course, be made to enter by means of ventilating radiators from, if possible, the four corners of the room. If hot-water heating is not desired a ventilating grate may be used, the lay-light made air-tight, several Sheringham inlets placed in the walls, and the extract obtained by a special foul-air flue in the chimney-breast, with possibly a "pilot-light," or gas jet, to accelerate the current.—B. F. and H. P. Fletcher.

24. Concrete

CONCRETE should be composed of pure clean water, broken stones, or ballast or clean pit gravel, with such a proportion of sharp sand as will fill the voids between the stones or gravel; and this latter should not be larger than such as will pass through a ring one and three-quarter inches in diameter. The proportion should never be less for Portland cement than one to six parts of stones and sand combined, and the concrete should be thrown into position steadily and as evenly as possible and tamped down in layers not more than twelve inches thick. The concrete for floors, pavements, roof-gardens, or roofs should be made in the proportion of one part Portland cement, four parts of broken brick, slag or other porous aggregate, and should be small enough to pass through a three-quarter inch ring; but no sand should be used. Fine ashes from the smith's forge make the best material for this purpose, but it should not exceed in bulk one-third of the whole mass. The concrete should be laid in position gradually and continually until the whole work is done, and should be tamped concurrently as laid in place.—Fred T. Hodgson.



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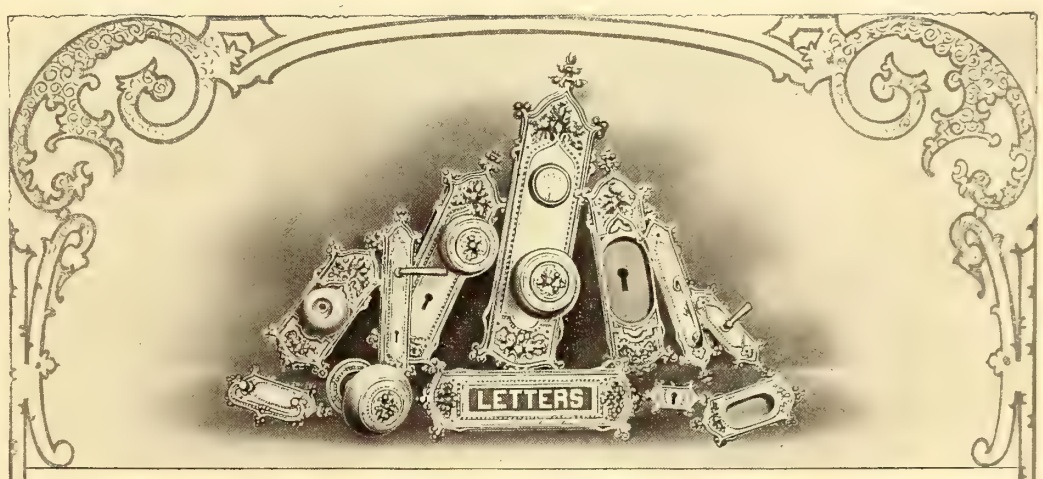

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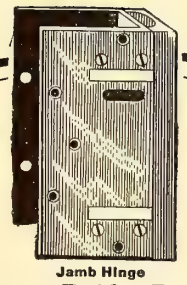

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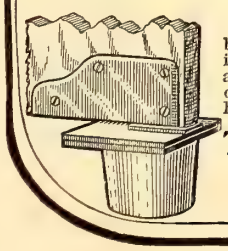

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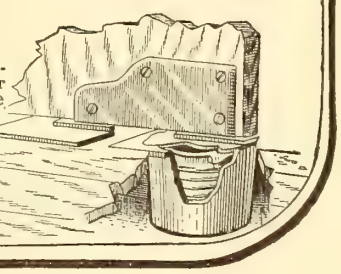

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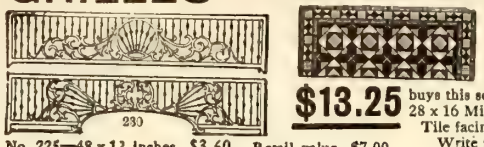

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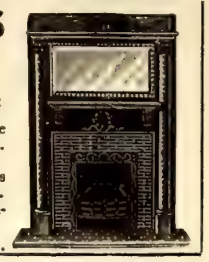

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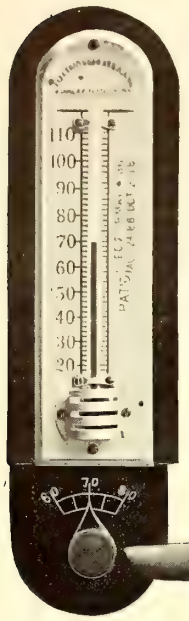

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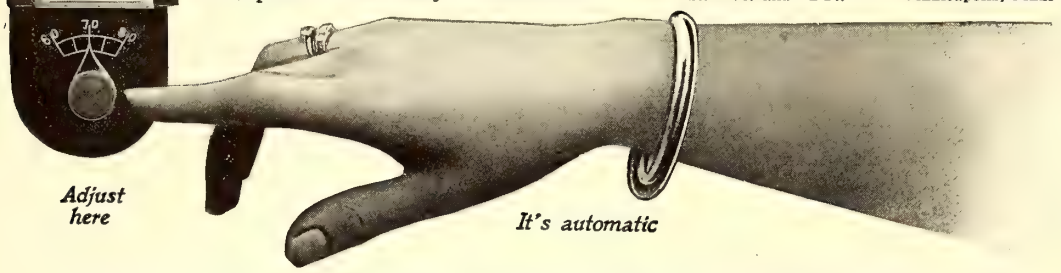

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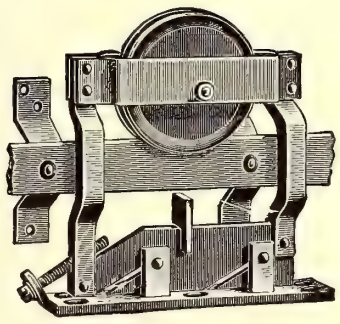

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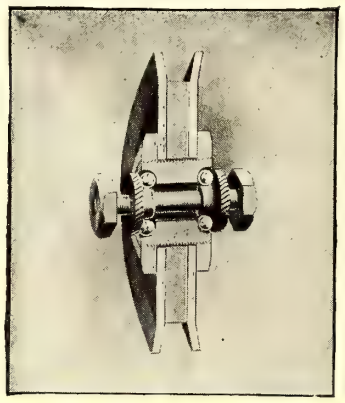

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NEW BOOKS

American Park Systems

THE EXISTING AND PROPOSED OUTER PARK SYSTEMS OF AMERICAN CITIES. Report of the Philadelphia Allied Organizations. By Andrew Wright Crawford and Frank Miles Day. Philadelphia, 1905.

This is a remarkable document in many ways. It is the first and most comprehensive study of park systems yet made in America. Thirty parks, in as many cities in the United States and Canada, are described and noted, and the systems of most of these illustrated in maps printed in colors, which show, at a glance, the extent of the various parks and their relationship to their own city. As a book of maps and plans alone this pamphlet has extraordinary value, while as a general picture of the park movement it is equally serviceable.

Not the least interesting fact connected with it is the long list of local Philadelphia organizations which have united in its production. No city is so dowered with petty jealousies as is the famous Pennsylvania metropolis. It is generally supposed by those outside its borders that persons living on one side of a certain street will not hold converse with those residing beyond it. Whether this ancient joke is true or not, Philadelphia is a city of intense personal and organic jealousy, and that nearly fifty different bodies should have joined hands on the park question, and should have met the expense of the publication of this pamphlet, is a happy indication of newer, broader conditions in a city long famed for its narrowness, as well as noteworthy evidence of the hold that parks, as useful adjuncts to the municipality, has gained on this most conservative of communities. If such a result can be obtained on such unlikely soil it is not unreasonable to look for equally good results under less difficult conditions.

Although the primary purpose of preparing this report has been the acquisition of a comprehensive park system for Philadelphia, it has very great, general value in summing up, both by means of text and maps, the work now being done in parks throughout the country. That the park movement is a very general one has long been known, but that it is quite so general, that so many admirable results have been obtained through the co-operation of many organizations and by disinterested effort and foresight has not before been so clearly set forth. The authors of this pamphlet are content with describing what exists, such conclusions as they draw having special reference to their own local problems in Philadelphia. It is not suggested that every city is doing its best or that the best results are always obtained; but it is at least established that such good work is being done almost everywhere, and a perusal of this book makes very clear the fact that there is the widest public interest in parks, and that their future development will be on more intelligent lines and with greater regard for the future than was the case when public parks began to be laid out. May the good work prosper!

Carnations and Pinks

CARNATIONS, PICOTEES AND THE WILD AND GARDEN PINKS. Written by several authorities and edited by E. T. Cook. London, 1905. Imported by Charles Scribner's Sons. Pp. 12+162. Price, $1.25 *net.*

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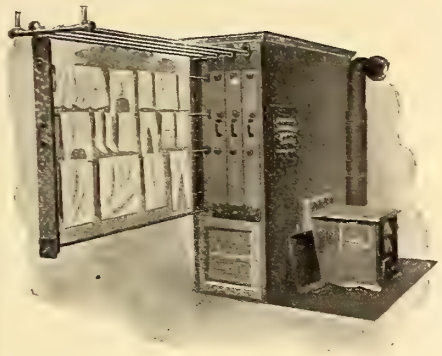

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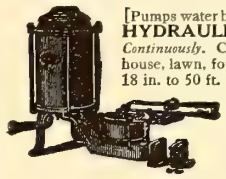

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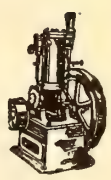

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beautiful plants. But a good book on so lovely a subject must greatly widen the cultivation of these plants and tempt those who do not grow them to plant them in their gardens. This is exactly the purpose of the volume which Mr. Cook has edited from two English garden periodicals. A dozen writers have contributed to the book which thus represents the expert advice and opinions of as many able writers. It is a book alive with suggestion and filled with hints of the most practical character on the cultivation of the carnation and pink.

Although pinks and carnations are welcome in so many ways of gardening, says Mr. Cook, perhaps their greatest use, other than in wall and rock work, is as edgings and underplantings to roses, or something of taller stature than their own. By "edgings," he does not mean straight or stiff borderings only, though the white pink and its forms are among the very best plants for this use, but informal fillings of the outer portions of beds and borders. Used like this with roses they are admirable, each plant enhancing the beauty of the other. They are, he adds, perhaps least suited for filling up whole beds, unless the beds are quite small and especially narrow in form.

The book begins with a brief early history of the plants, followed by others on the Carnation in the Garden, the Border Carnation, the Picotee, white and yellow ground, the Malmaison Carnation, the Tree or Perpetual Flowering Carnation, Carnations for Exhibition, Carnations in Town Garden, Carnation Growing in America, Diseases of the Carnation, the Pink, the Wild Pinks, and the Pinks of the Alps. The range of topics is, therefore, very complete and thoroughly comprehensive.

This is by no means a book on easy methods of carnation growing; but it presents all the essential facts of carnation and pink culture. It is very much more than a guide to ways and means. Flowers must not only be grown to produce flowers, but they must be grown in an artistic way, so that their individual beauty will contribute its full share to a general effect. This aspect of carnation cultivation—by no means its least important aspect—is referred to on almost every page of this book, the true and only way of exciting a genuine love for flowers. It contains a number of half-tone illustrations, reproduced in an extraordinarily beautiful way, illustrating individual plants and their use in the garden.

The Gardens of Italy

THE GARDENS OF ITALY. By Charles Latham, with descriptions by E. March Phillipps. London: Country Life, Limited, 1905. New York: Charles Scribner's Sons. 2 vols., folio, pp. 159+144. Price, $18.00 *net*.

The Italian villa is essentially a pleasure house, and the Florentines of the Renaissance spent so much of their time in their villas that some of their contemporaries considered that they were insane. Within a radius of twenty miles of the Tuscan capital there were twenty thousand estates with eight hundred palaces built of cut stone. The "Italian garden" is a complement of the "Italian villa," and when they are combined the result is one of the most charming sights in the world. An "Italian garden" can be created almost anywhere, but it is in this wonderful land of an old civilization, gifted with so transcendent a share of natural beauty, that this combination of art and nature is at its best. Glades, woodland, terraces,

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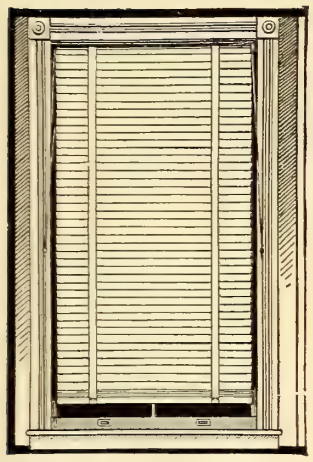

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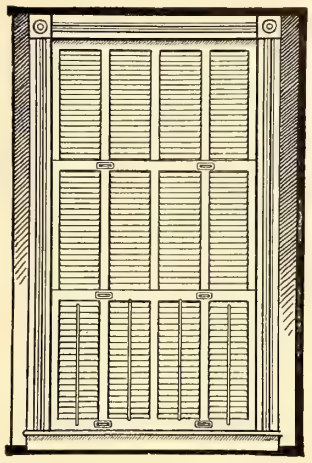

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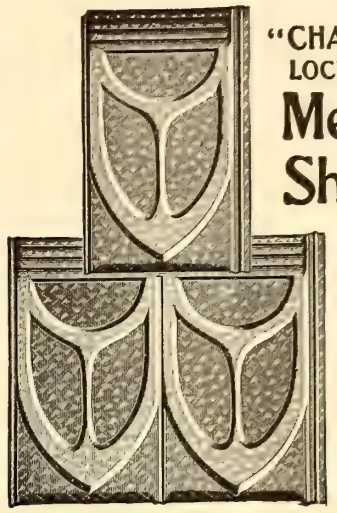

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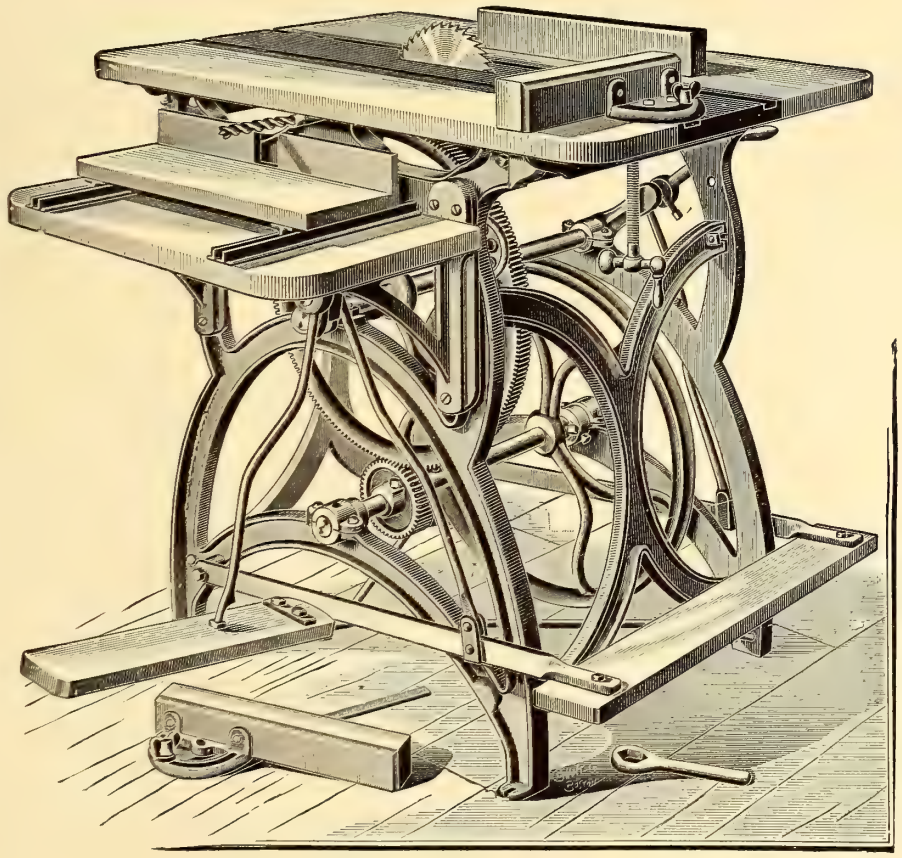

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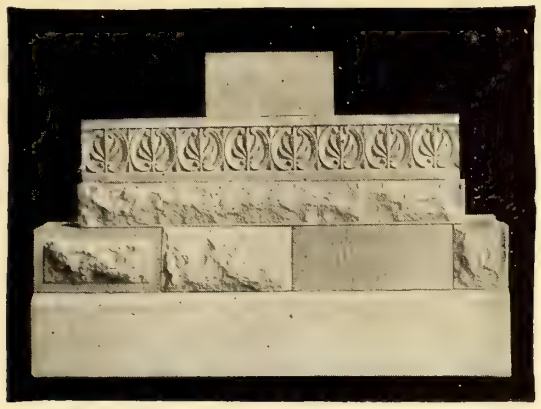
stonework, all coupled with glorious views, tend to make a sojourn in Italy among the most refined and delightful of pleasures. Fortunately the Italians have kept up their love for their gardens, even though in all cases they have not kept their gardens up. Some of these beautiful spots are overrun with weeds and the stonework is in ruins, presenting a most melancholy sight.

The sumptuous volumes before us open up a new series of thought, which leads the mind into the realms of the beautiful, which results in better thoughts, for no one can examine this work carefully without improving his ideals, and the wonderful culture of the Renaissance must have been, in some degree, dependent on the delightful environment in which the learned found themselves. The very titles of the villas conjure up the names of the great Pico della Mirandola, Poliziano and Lorenzo de' Medici, when we mention the Villa Farnese, Villa Medici, Villa Lante, Villa Palmieri, Villa Albani, Villa Pamphilj, Villa Doria, Villa Borghese, Villa Barberini, Villa d'Este, Villa Torlonia and a score of others equally famous. The wonderful growths of ilexes, stone pines, cypress, firs, box, yews and orange trees have, of course, much to do with enhancing natural beauties. The selection of views in the volume is most admirable, and they are finely reproduced. There is little to criticize and much to praise in this admirable work, which appeals to every lover of the beautiful. To the landscape architect it is a necessity, to the architect it is a very desirable book; while to those who own or are thinking of laying out gardens it is a vast fund of ideas which can be modified to meet the requirements of both time and clime.

PUBLISHERS' DEPARTMENT

Chimneys and Heating

THE draft points specified below, and often overlooked by heating contractors, architects and owners, have been demonstrated by the experts of the Furman Boiler principle and those of the Henderson Manufacturing Company, as constituting the best system of draft, escape of gas, smoke, etc., for any heating scheme. A chimney flue to effect the best results should be round. Next in order of efficiency comes the square flue, while the least effective is one of oblong form. The round flue presents an amount of friction surface to the smoke and escaping gases equal to about 3 1-7 times its diameter, the square flue presents four times its diameter as friction surface; while the oblong flue's friction surface increases, beyond that of the square flue, in direct proportion to the extent of elongation. As an illustration: In an 8-inch round flue the friction surface is 25.13 inches and contains 50.265 square inches of area. In an 8-inch square flue the friction surface is 32 inches and contains 64 square inches of area; while in an oblong flue 4 x 16 inches the friction surface is 40 inches and the area 64 square inches. If the square form of flue is desired, the side of the square should be at least equal to the diameter of the boiler smoke pipe, as the corners of the square flue are of practically no value for the smoke passage, and in very large flues even become a detriment, in the way of eddying currents which upset the true course of smoke and escaping gases. In other words, the 64 square inches in the 8-inch flue are of no greater value, if as great, for the smoke passage than the 50,265 square inches of the 8-inch round flue. In an oblong flue the depth should never be less than from 6 to 8 inches, even for the smallest flues; and the length not to exceed 1¾ times the depth. If an oblong flue is unavoidable, better results



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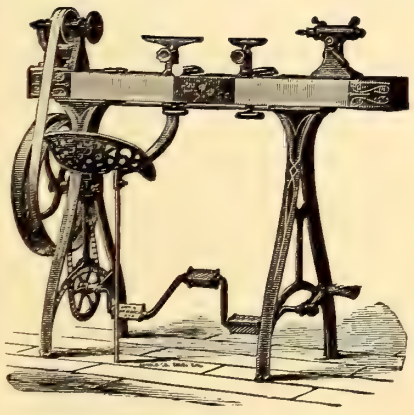

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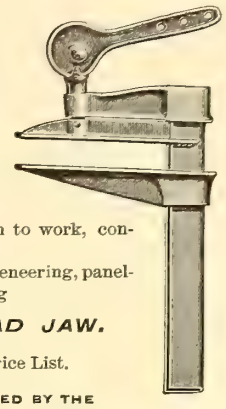

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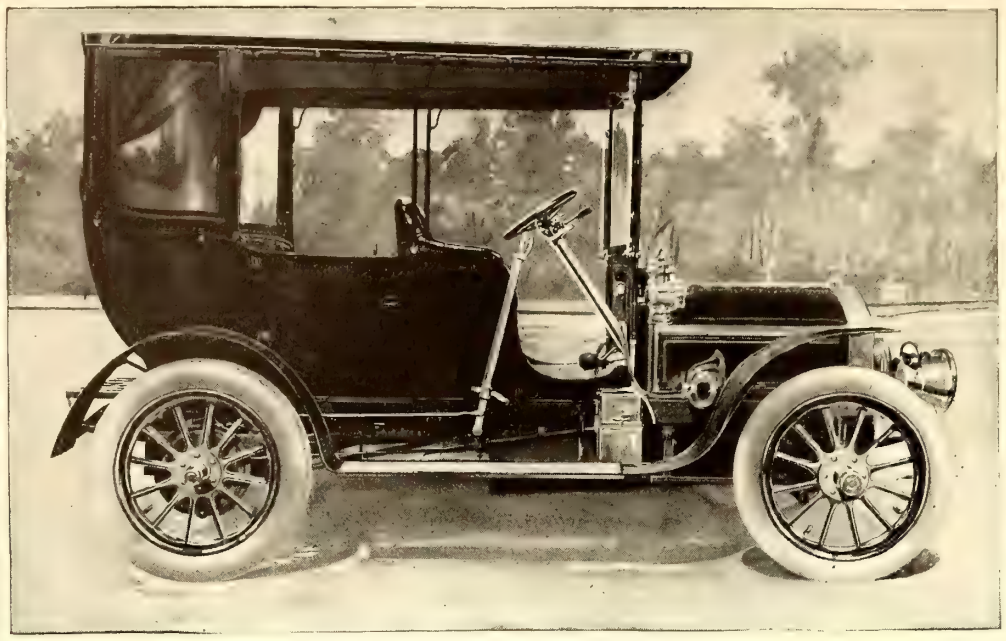

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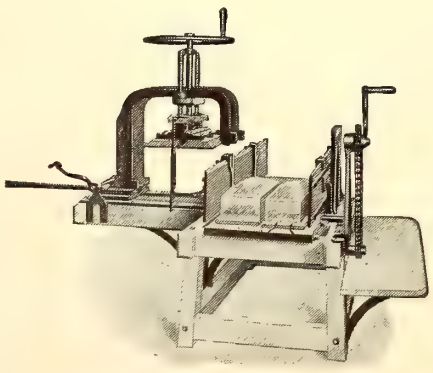

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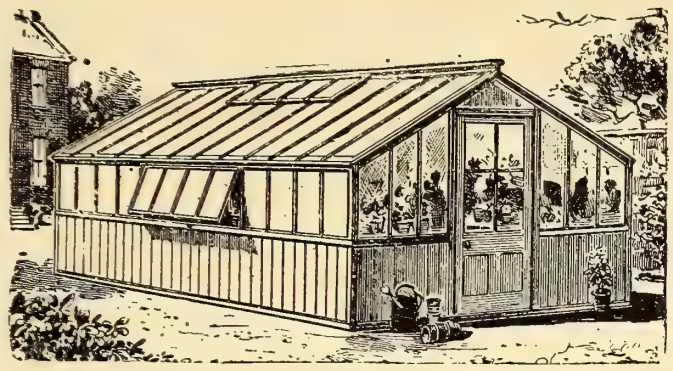
will be obtained if the smoke pipe can enter the same on the narrow side, as this will allow the smoke and escaping gases more room in which to change their course from the horizontal smoke pipe to the vertical flue. A flue of less than six inches of depth will not allow freedom for this change of direction, which directly accounts for the unsuccessful operation of boilers on shallow flues, and the consequent condemnation of the entire system. Be sure that the flue is of proper size and shape and has a good draft before attaching the boiler to it; for many heating systems, first-class in other respects, fail to give satisfaction merely on account of poor chimney drafts. A newly built chimney will not draw perfectly and due allowance should be made until it is thoroughly dried out, which will probably take a week or two. In looking over the chimney and connecting the boiler to it, it is well to see that there are no openings into the boiler flue, either above or below the boiler smoke pipe, special care being exercised at the base of the flue that the boiler flue does not connect with the other flues through the soot pocket. That the cross writhes or division walls of the chimney, if it contains more than one flue, are carried up to the top of the chimney, so that each flue is independent of the others throughout its entire length. That the area of the chimney flue is maintained full size throughout its entire length, and is free from all obstructions, such as loose brick, mortar, etc., that might have become lodged in it. That the chimney extends above the highest point of the roof or other immediate surrounding elevation. This is quite important, and failure to observe the same may be looked to as the cause for a poor draft. That the flue is at least six or seven inches in depth and never less in area than size of smoke pipe given by a boiler manufacturer. That the boiler sets as near the chimney as possible, thus shortening the length of the smoke pipe, which is desirable. That the smoke pipe does not project into the chimney too far and thus lessen the area of the flue at this important point, where the smoke leaves the pipe and enters the flue. The research shown in this exposition of the peculiar qualities of a chimney is repeated in every branch of the work carried on by the Herendeen Company, in steam and hot-water heating, a system considered by experts as possessing many of the great advantages. These may be enumerated as follows: First, the heat derived from a steam or hot-water system is thoroughly healthy—the air of the rooms being heated by contact with the radiators, and, consequently, not becoming a mixture of coal gas, dust, and smoke. Second, it is possible to thoroughly distribute the heat —thus enabling an evenness of warmth and uniformity of temperature to be maintained throughout the building. Third, an efficient and properly installed steam or hot-water apparatus requires little care and attention. It is safe, durable, simple in operation, and the average housewife or servant can easily attend to the management. Finally, great economy of fuel is obtained by the use of these systems, the saving often averaging from 25 to 33 per cent. The boilers made by this firm are practically self-cleaning and now produced in over two hundred different styles and sizes, embracing sectional, portable and brick-set types. They are known under the names of Furman water-tube boilers, portable boilers, brick-set boilers, "Junior" boilers and tank heaters, laundry, store and water heater and new sectional boilers. The Furman new sectional boiler is a new type, cast in sections which assemble in a vertical position. The sections are made from the best quality of cast iron, and are without doubt the strongest and most durable that can be used for the pur-



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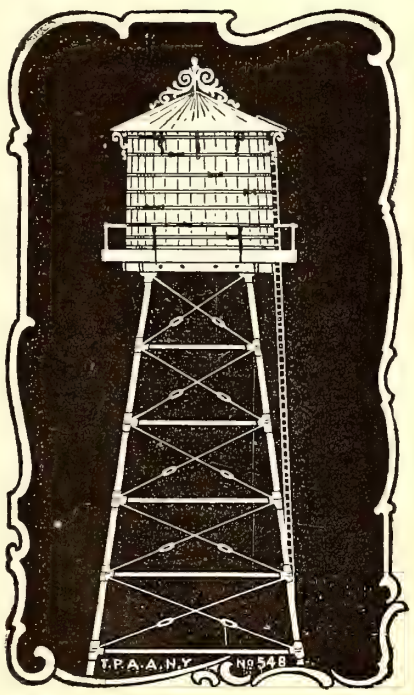

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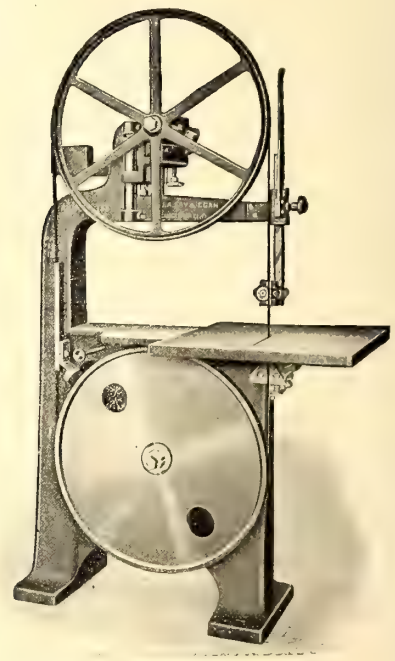

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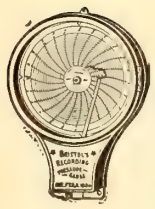

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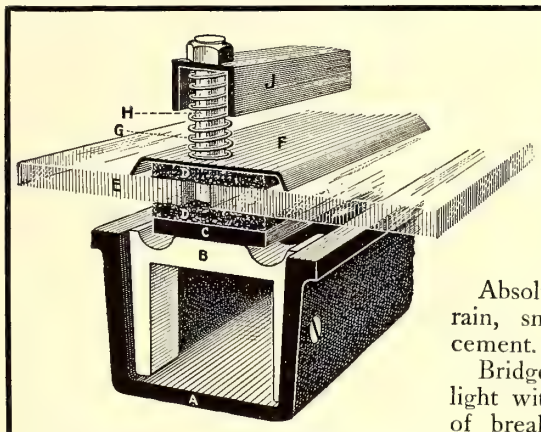

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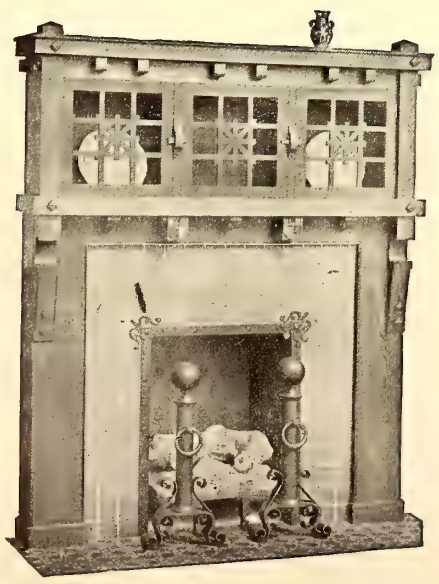

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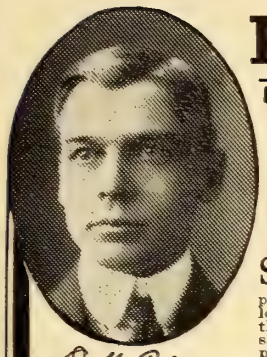

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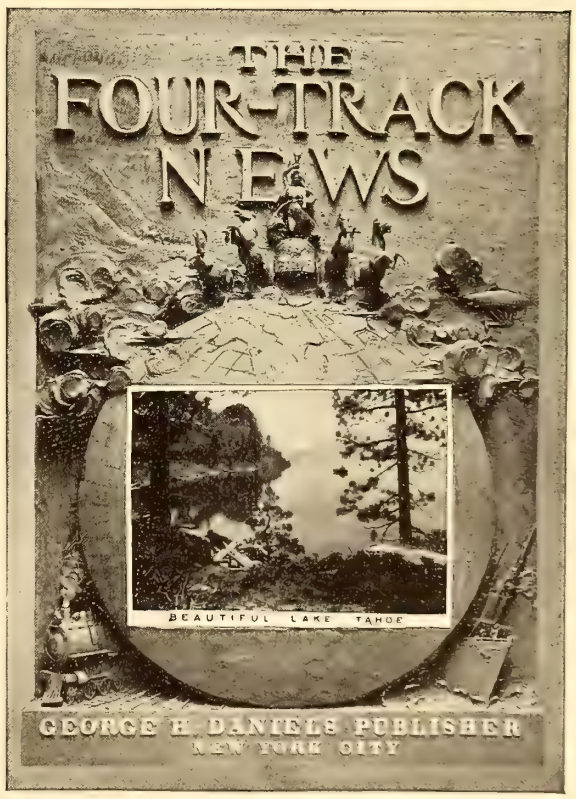

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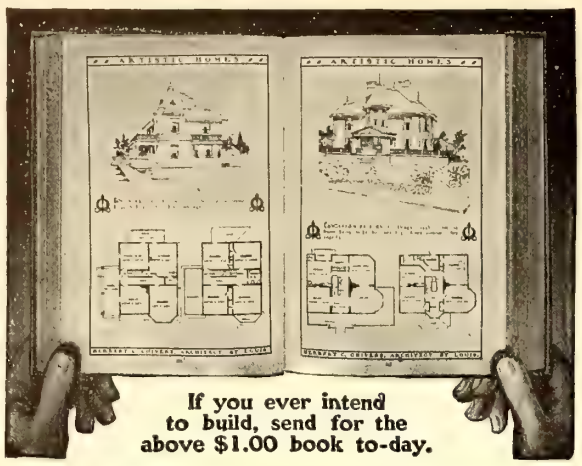

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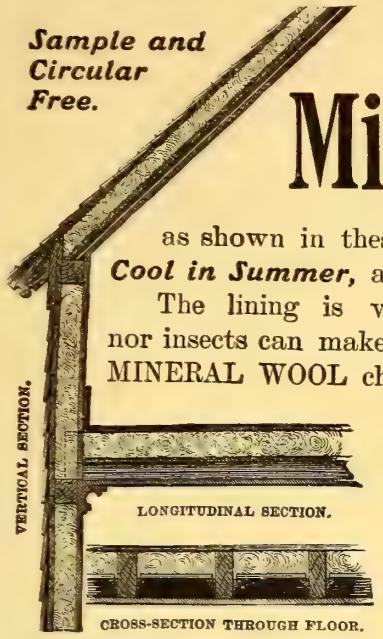

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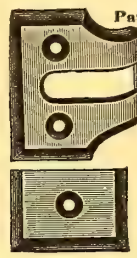

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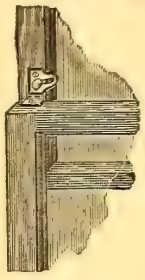

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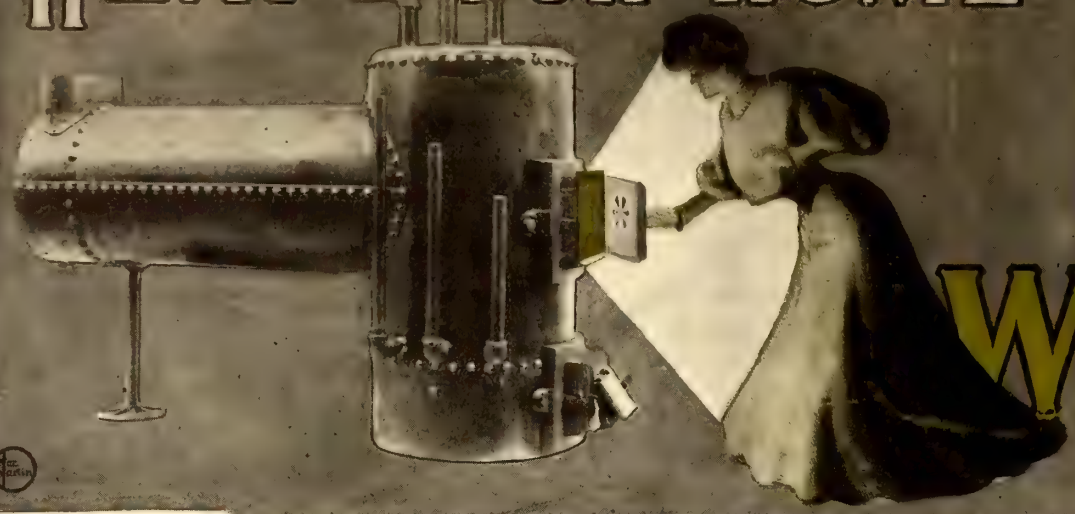

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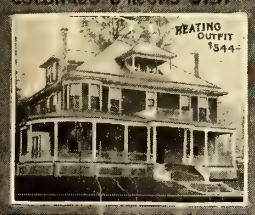

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